



MANAGEMENT OF THE **CALIFORNIA** **STATE WATER** **PROJECT**

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Governor, State of California

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California Natural Resources Agency*

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Bulletin 132-10

Management of the California State Water Project

Covers Activities during Calendar Year 2009



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Edmund G. Brown Jr. *Governor
State of California*

John Laird *Secretary for Natural Resources
California Natural Resources Agency*

Mark W. Cowin *Director
Department of Water Resources*

Foreword

*B*ulletin 132-10, Management of the California State Water Project, continues the Bulletin 132 annual series begun in 1963. Bulletin 132-10 updates water supply planning, construction, financing, management, and operation activities of the State Water Project. Appendix B contains data and computations used to determine the State Water Project water contractors' Statements of Charges for 2011. Appendix B was previously printed and distributed to State Water Project water contractors to document and support calculation of contractors' annual charges.

The Bulletin discusses significant events and issues that affect State Water Project management and operations. The Bulletin covers the period from January 1, 2009, through December 31, 2009.

Bulletin 132-10 also discusses water supply and delivery as well as Delta resources and environmental issues, local assistance programs, power resources, recreation, and financial analysis of the State Water Project.

Please note that the water delivery figures listed are accurate at the time of this Bulletin 132 publication, but small volumes of water may be reclassified over time pursuant to long-term water supply contract provisions. If your research requires more current data than were available at the time of publication, please consult the most recent edition of Bulletin 132 and/or contact DWR staff in the State Water Project Analysis Office.



Mark W. Cowin
Director

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California Water Commission

The California Water Commission consists of nine members appointed by the Governor and confirmed by the Senate. Seven members are chosen for their expertise related to the control, storage, and beneficial use of water, and two are chosen for their knowledge of the environment. The commission advises the Director of the Department of Water Resources (DWR) on matters within DWR's jurisdiction, approves rules and regulations, and monitors and reports on the construction and operation of the State Water Project (SWP).

The roles and responsibilities of the California Water Commission are defined in the Water Code, Government Code, and Code of Civil Procedure.

The commission's SWP-specific responsibilities are to:

- conduct an annual review of the construction and operation of the SWP and report to DWR and the Legislature with any recommendations (Water Code Section 165);
- hold public hearings on all additional facilities proposed to be added to the SWP and name any new facilities (Water Code Sections 161.5 and 166); and
- adopt a resolution of necessity, and give each affected person a venue to be heard, before DWR may commence an eminent domain proceeding (Code of Civil Procedure Section 1245.210).

Commission members at the time of publication are:

Joseph Byrne (Chair)

Andrew Ball

Daniel Curtin

Joe Del Bosque

Kimberley Delfino

Luther Hintz

Anthony Saracino

Acronyms and Abbreviations

Symbols

µg/L micrograms per liter

A

AB Assembly Bill

ACWA Association of California Water Agencies

af acre-feet/acre-foot

ANS Aquatic Nuisance Species Program

B

Bay-Delta Accord Principles for Agreement on Bay-Delta Standards between the State of California and the Federal Government

Bay-Delta Estuary San Francisco Bay/Sacramento-San Joaquin Delta Estuary

Bay-Delta Plan Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary

BDCP Bay Delta Conservation Plan

BO biological opinion

C

CAISO California Independent System Operator

CALFED CALFED Bay-Delta Program

California State Parks California Department of Parks and Recreation

CAMAL Net California Association of Mutual Aid Laboratories Network

CAP Condition Assessment Program

C.A.S.T. Catch a Special Thrill

CBDA California Bay-Delta Authority

CCR California Code of Regulations

CDO Cease and Desist Order

CEQA California Environmental Quality Act

CESA California Endangered Species Act

CFR Comprehensive Facility Review

cfs cubic feet per second

CIMIS California Irrigation Management Information System

Corps U.S. Army Corps of Engineers

CVFPB Central Valley Flood Protection Board

CVP Central Valley Project

CWC California Water Code

CWIN California Water Impact Network

CWT coded wire tag

D

D-1641 State Water Resources Control Board, Water Right Decision 1641
DBW Department of Boating and Waterways
DDA Davis-Dolwig Act
Delta Fish Agreement Delta Pumping Plant Fish Protection Agreement
DFW Department of Fish and Wildlife (formerly Department of Fish and Game)
DHCCP Delta Habitat Conservation and Conveyance Program
DO dissolved oxygen
DOE Division of Engineering
DPH Department of Public Health
DPS distinct population segment
DSM2 Delta Simulation Model 2
DSOD Division of Safety of Dams
DWB Drought Water Bank
DWR Department of Water Resources
DWSC Stockton Deep Water Ship Channel

E

EC electrical conductivity
EIR environmental impact report
EIS environmental impact statement
EPA U.S. Environmental Protection Agency
ESA federal Endangered Species Act Endangered Species Act
ET_o reference evapotranspiration
EWA Environmental Water Account

F

FERC Federal Energy Regulatory Commission
Fishery Plan Revised Fishery Protection Plan
FRFH Feather River Fish Hatchery
FWS Future Water Supply

H

hp horsepower

I

IEP Interagency Ecological Program
IFDM Integrated On-Farm Drainage Management
IFM Integrated Forward Market
IR Interim Renewal
IRWM Integrated Regional Water Management

J

JPOD Joint Point of Diversion

K

KWBA Kern Water Bank Authority

kWh kilowatt hour

L

LADWP Los Angeles Department of Water and Power

LOSRA Lake Oroville State Recreation Area

LSIP Levee System Integrity Program

LTMS Long-Term Management Strategy

M

maf million acre-feet

mg/L milligrams per liter

MIDS Morrow Island Distribution System

mmhos/cm millimhos per centimeter

MRTU Market Redesign and Technology Upgrade

mS/cm millisiemens per centimeter

MW megawatt

MWELO Model Water Efficient Landscape Ordinance

MWh megawatt hour

MWQI Municipal Water Quality Investigations

MWQP Municipal Water Quality Program

N

NDFCERP North Delta Flood Control and Ecosystem Restoration Project

NDOI Net Delta Outflow Index

NEPA National Environmental Policy Act

NERC North American Electric Reliability Corporation

NOAA Fisheries National Marine Fisheries Service

NVE NV Energy

O

OCAP Operations Criteria and Plan

O&M Division of Operations and Maintenance

OMP&R operations, maintenance, power, and replacement

OM&R operations, maintenance, and replacement

ORT Old River near Tracy

P

PAO Public Affairs Office
PFMA Potential Failure Mode Analysis
PFR Periodic Facility Review
PG&E Pacific Gas & Electric Company
POD pelagic organism decline

Q

QA/QC quality assurance and quality control
QSA Quantification Settlement Agreement

R

Reclamation Bureau of Reclamation
R&FWE Recreation and Fish and Wildlife Enhancement
RM River Mile
RPA reasonable and prudent alternative
RRR Red Rock Ranch
RST rotary screw trap
RTDF-CP Real Time Data and Forecasting Comprehensive Program
RTWQMP Real-time Water Quality Monitoring Program
RWQCB Regional Water Quality Control Board

S

Sacramento Valley 40-30-30 Index Sacramento Valley Water Year Hydrologic Classification
San Joaquin Valley 60-20-20 Index San Joaquin Valley Water Year Hydrologic Classification
SARMP Settlement Agreement Recreation Management Plan
SB Senate Bill
SBA South Bay Aqueduct
SCE Southern California Edison
SDIP South Delta Improvements Program
SDWA South Delta Water Agency
SJRRP San Joaquin River Restoration Program
SMP Suisun Marsh Habitat Management, Preservation, and Restoration Plan
SMPA Suisun Marsh Preservation Agreement
SMSCG Suisun Marsh Salinity Control Gates
SMUD Sacramento Municipal Utility District
SRA State Recreation Area
SRCD Suisun Resource Conservation District
SVWMA Sacramento Valley Water Management Agreement
SVWMP Sacramento Valley Water Management Program
SWP State Water Project
SWPAO State Water Project Analysis Office
SWRCB State Water Resources Control Board

U

Unit San Luis Unit of the Central Valley Project

USFWS U.S. Fish and Wildlife Service

V

VAMP Vernalis Adaptive Management Plan

W

WCI Whitaker Contractors, Inc.

WECC Western Electricity Coordinating Council

WQCP Water Quality Control Plan

Y

Yuba Accord Lower Yuba River Accord

SWP Long-term Water Contractors

The State Water Project long-term water supply contractors are listed below, followed by shortened forms of their names that are used in Bulletin 132.

| | |
|--|-----------------|
| Alameda County Flood Control and Water Conservation District, Zone 7 | Alameda-Zone 7 |
| Alameda County Water District | Alameda County |
| Antelope Valley-East Kern Water Agency | AVEK |
| Castaic Lake Water Agency | Castaic Lake |
| City of Yuba City | Yuba City |
| Coachella Valley Water District | Coachella |
| County of Butte | Butte |
| County of Kings | Kings |
| Crestline-Lake Arrowhead Water Agency | Crestline |
| Desert Water Agency | Desert |
| Dudley Ridge Water District | Dudley Ridge |
| Empire-West Side Irrigation District | Empire |
| Kern County Water Agency | Kern |
| Littlerock Creek Irrigation District | Littlerock |
| Metropolitan Water District of Southern California | Metropolitan |
| Mojave Water Agency | Mojave |
| Napa County Flood Control and Water Conservation District | Napa |
| Oak Flat Water District | Oak Flat |
| Palmdale Water District | Palmdale |
| Plumas County Flood Control and Water Conservation District | Plumas |
| San Bernardino Valley Municipal Water District | San Bernardino |
| San Gabriel Valley Municipal Water District | San Gabriel |
| San Geronio Pass Water Agency | San Geronio |
| San Luis Obispo County Flood Control and Water Conservation District | San Luis Obispo |
| Santa Barbara County Flood Control and Water Conservation District | Santa Barbara |
| Santa Clara Valley Water District | Santa Clara |
| Solano County Water Agency | Solano |
| Tulare Lake Basin Water Storage District | Tulare |
| Ventura County Watershed Protection District | Ventura |

Non-SWP Water Contractors

The non-SWP water contractors are listed below, followed by shortened forms of their names that are used in Bulletin 132.

| | |
|---|--------------------------|
| Arvin-Edison Water Storage District | Arvin-Edison |
| Belridge Water Storage District | Belridge |
| Berrenda Mesa Water District | Berrenda Mesa |
| Browns Valley Irrigation District | Browns Valley |
| Buena Vista Water Storage District | Buena Vista |
| Byron-Bethany Irrigation District | Byron-Bethany |
| Cawelo Water District | Cawelo |
| City of Tracy | Tracy |
| Contra Costa Water District | Contra Costa |
| County of Fresno | Fresno |
| County of Tulare | Tulare |
| Del Puerto Water District | Del Puerto |
| East Contra Costa Irrigation District | East Contra Costa |
| Garden Highway Water Company | Garden Highway |
| Hills Valley Irrigation District | Hills Valley |
| Kern Delta Water District | Kern Delta |
| Kern-Tulare Water District | Kern-Tulare |
| Lost Hills Water District | Lost Hills |
| Lower Tule River Irrigation District | Lower Tule |
| Merced Irrigation District | Merced |
| Oswald Water District | Oswald |
| Pixley Irrigation District | Pixley |
| Placer County Water Agency | Placer |
| Plain View Water District | Plain View |
| Rag Gulch Water District | Rag Gulch |
| Rosedale-Rio Bravo Water Storage District | Rosedale-Rio |
| San Luis & Delta-Mendota Water Authority | San Luis & Delta-Mendota |
| Semitropic Water Storage District | Semitropic |
| South Feather Water and Power Agency | South Feather |
| Tejon-Castac Water District | Tejon-Castac |
| Tranquility Irrigation District | Tranquility |
| Tri-Valley Water District | Tri-Valley |
| United Water Conservation District | United |
| West Kern Water District | West Kern |
| Western Hills Water District | Western Hills |
| Westlands Water District | Westlands |
| Westside Mutual Water Company | Westside |
| Wheeler Ridge-Maricopa Water Storage District | Wheeler Ridge-Maricopa |
| Yuba County Water Agency | Yuba |



State Water Project Highlights

Lake Oroville in 2009, the third consecutive year of drought.



The annual Bulletin 132 series began in 1963 and reported the first deliveries of water by the new State Water Project (SWP). Bulletin 132-10, *Management of the California State Water Project*, continues this series as the forty-eighth edition. It reports on SWP planning, construction, finance, management, and operations during calendar year 2009. The SWP is operated and maintained by the California Department of Water Resources (DWR).

The SWP is one of the world's largest water, power, and conveyance systems. In the past decade it has conveyed an annual average of 2.9 million acre-feet (maf) of water. SWP facilities—pumping and power plants; reservoirs, lakes, and storage tanks; canals, tunnels, and pipelines—capture, store, and convey water to 29 public water agencies.

2008–2009 Water Year and SWP Highlights

The Sacramento Valley Water Year Hydrologic Classification (Sacramento Valley 40-30-30 Index) and the San Joaquin Valley Water Year Hydrologic Classification (San Joaquin Valley 60-20-20 Index) were dry and below normal, respectively, based on observed data for water year 2008–2009.

At the end of the 2008–2009 water year, water storage in major SWP reservoirs and the State share of joint-use reservoirs was 2.14 maf or 39 percent of maximum storage, compared to 1.95 maf or 36 percent of maximum storage at the end of water year 2007–2008. For more information see Chapter 8, Water Supply.

In 2009, SWP delivered 2,915,435 acre-feet (af) to 29 SWP water contractors and 24 other agencies. Table A deliveries totaled 1,053,253 af, of which 179,500 af was 2008 carryover. For more information see Chapter 9, Water Contracts and Deliveries.

DWR continued to be its own energy scheduling coordinator and scheduled the purchase and sale of energy to operate the SWP. In 2009, energy used at the 28 SWP pumping and generating plants totaled 6.09 million megawatt hours (MWh). DWR sold 1.53 million MWh of energy to 7 utilities

and 19 WSPP power marketers for total revenues of \$62.27 million. See Chapter 10, Power Resources, for details.

In 2009, SWP facilities supported an estimated 4.2 million recreation days of use, the same level reported in 2008; 46 percent of the total SWP recreational use occurred at the four major reservoirs in Southern California: Pyramid Lake, Castaic Lake, Silverwood Lake, and Lake Perris. For further recreation information, see Chapter 13, Recreation.

The project continued to pay bondholders as scheduled and remained financially viable. In 2009, the SWP handled approximately \$826 million each in revenues and expenses. For detailed information, see Chapter 14, Financial Analysis.

The Division of Safety of Dams Celebrates 80 Years

The Division of Safety of Dams (DSOD) turned 80 on August 14, 2009. Since 1929, many dam projects have been built in California under the authority of DSOD. They evaluate proposed modifications to existing dams, as well as the design and construction of new jurisdictional dams, and they continue to take a leadership role in dam safety.

California Cooperative Snow Surveys Program Turns 80

Through the years, snow surveys became a successful way to forecast runoff. In 1929, the State Legislature established a statewide program and determined that the Division of Water Resources (now the Department of Water Resources) would be the coordinator of the “California Cooperative Snow Surveys Program” and so directed it in Section 228 of the Water Code. Today, California has more than 50 State, national, and private agencies that combine their efforts in collecting snow data.

Drought

On June 12, 2008, the Governor proclaimed a state of emergency for nine Central Valley counties due to the drought. In 2009, with California in its third consecutive year of drought, the Governor proclaimed a state of emergency on February 27, 2009, for the entire State as the severe drought conditions continued, and the impacts were felt well beyond the Central Valley.

DWR conducted a series of urban drought workshops in March 2009 to assist local agencies to prepare for water shortages.

In April 2009, *California’s Drought: Water Conditions & Strategies to Reduce Impacts* was sent to the Governor. The report provides an update on the State’s drought conditions and water availability.

Climate Change

Climate change will have a dramatic effect upon water supply, flood management, and ecosystems. In 2009, DWR continued to be actively engaged in climate change related activities—research, planning, modeling, data collection, participation on the Climate Action Team, implementation of sustainable business practices, grant programs, technical assistance, and public outreach.

DWR was named a “Climate Action Leader” in 2009 by the California Climate Action Registry (CCAR). CCAR member organizations earn this special recognition by calculating, disclosing, and independently verifying their greenhouse gas emissions.

In 2009, DWR published *Using Future Climate Projections to Support Water Resources Decision Making in California*. This report documents work over the last several years on climate change impacts on SWP operations.

Yearly Activities Summary

2009 Precipitation and Water Storage

Water stored and delivered by the SWP conservation and transportation facilities originates from rainfall and snowmelt in Northern and Central California watersheds, where most of the State’s precipitation occurs. DWR monitors and records annual precipitation and runoff during each water year, which begins on October 1 and ends on September 30.

Precipitation and Snowpack in Water Year 2008–2009

California experienced less than average rainfall and mountain snowpack during water year 2008–2009 (covering October 2008 through September 2009). The State received precipitation at 81 percent of average in water year 2008–2009, compared to 78 percent of average in 2007–2008. Though a below-average year, the Northern Sierra 8-Station Precipitation Index recorded its fourteenth wettest May in 115 years. Approximately 25 percent of the water year precipitation in the Northern Sierra 8-Station Precipitation Index was due to two storms in February. The statewide snowpack peaked at 88 percent of its April 1 average in late March.

The Sacramento Valley Water Year Hydrologic Classification (Sacramento Valley 40-30-30 Index) and the San Joaquin Valley Water Year Hydrologic Classification (San Joaquin Valley 60-20-20 Index) were “dry” and “below normal,” respectively, based on observed data for water year 2008–2009.

Runoff

Statewide river runoff totaled 65 percent of average in water year 2008–2009. Runoff in the Sacramento River Region, San Joaquin River Region, and Tulare Lake Region was 70, 81, and 71 percent of average, respectively.

Water Year 2008–2009 Storage Totals

The average end-of-month total storage for water year 2008–2009 in major SWP reservoirs and the State’s share of joint-use reservoirs was 2.14 maf or 39 percent of maximum storage. End-of-water-year storage at Lake Oroville was 1.34 maf, about 0.24 maf more than the previous water year.

Calendar Year 2009 Storage Total

The total storage in major SWP reservoirs was about 2.35 maf at the end of 2009, compared with 1.79 maf in 2008. On December 31, 2009, the State’s share of San Luis Reservoir storage was 760,213 af, and the combined storage in the southern reservoirs was 555,601 af.

Diversions from the Delta

In 2009, the SWP diverted 1,665,015 af at Banks Pumping Plant. There was 13,216 af of Cross Valley Canal water and 115,359 af of Central Valley Project (CVP) water wheeled at Banks Pumping Plant by DWR during 2009.

Maximum daily Delta exports occurred on July 29, 2009, at 23,391 af. Combined SWP and CVP monthly Delta exports in 2009 varied from a low of 127,880 af in June to a high of 644,998 af in July. In 2009, Delta

exports totaled approximately 3.82 maf. For more information see Chapter 8, Water Supply.

2009 Water Supplies, Contracts, and Deliveries

2009 Water Deliveries

DWR approved 0.63 maf on November 29, 2008, resulting in initial Table A amounts of 15 percent of most SWP water contractor requests. DWR increased the 2009 Table A amounts to 1.67 maf, or 40 percent, on May 20, 2009.

In 2009, 2,915,435 af was delivered to 29 SWP water contractors and 24 other agencies, categorized as follows:

- 1,053,253 af of Table A water;
- 6,032 af of Article 21 water;
- 179,500 af of 2008 carryover water;
- 139,043 af recovered from water banks;
- 117,553 af of flexible storage withdrawal from Castaic Lake and Lake Perris;
- 9,376 af of settlement water;
- 2,047 af of SWP water for recreation and fish and wildlife;
- 1,408,631 af of non-SWP water delivered to satisfy settlement agreements and agreements with SWP water contractors for local water supplies;
- 166,427 af of 2009 Transfer/Dry Year Purchase Program;
- 1,163,175 af of local water;
- 5,389 af of permit water; and
- 73,640 af delivered to satisfy agreements between the SWP and CVP.

Table H-1 shows SWP water deliveries by category for 1962 through 2009. For more information, see Chapter 9, Water Contracts and Deliveries.

Table H-1 SWP Water Delivered by Category, 1962–2009 (Acre-feet)

| Year | Table A Water | | | Other SWP Water Deliveries | | | | | |
|--------------|--------------------------|-------------------|-------------------|----------------------------|------------------|--------------------------|---------------------------------------|-----------------------------------|--------------------|
| | Municipal and Industrial | Agricultural | Total | Article 21/Unscheduled | | Other Water ^a | Feather River Diversions ^b | Fish & Wildlife/ Recreation Water | Total Deliveries |
| | | | | Municipal and Industrial | Agricultural | | | | |
| 1962 | — | — | — | — | — | 9,704 | 7,499 | — | 17,203 |
| 1963 | — | — | — | — | — | 13,212 | 16,049 | — | 29,261 |
| 1964 | — | — | — | — | — | 21,743 | 17,891 | — | 39,634 |
| 1965 | — | — | — | — | — | 35,985 | 27,425 | — | 63,410 |
| 1966 | — | — | — | — | — | 59,599 | 33,361 | — | 92,960 |
| 1967 | 5,563 | 5,791 | 11,354 | 0 | 0 | 45,225 | 24,639 | — | 81,218 |
| 1968 | 86,541 | 85,168 | 171,709 | 10,000 | 111,534 | 1,214 | 903,367 | — | 1,197,824 |
| 1969 | 63,956 | 129,064 | 193,020 | 0 | 72,397 | 8,692 | 832,454 | — | 1,106,563 |
| 1970 | 83,415 | 150,578 | 233,993 | 0 | 131,848 | 25,401 | 804,320 | — | 1,195,562 |
| 1971 | 93,776 | 263,564 | 357,340 | 0 | 294,581 | 35,438 | 825,886 | 8 | 1,513,253 |
| 1972 | 186,796 | 425,005 | 611,801 | 0 | 422,322 | 53,848 | 875,529 | 6,489 | 1,969,989 |
| 1973 | 297,497 | 395,391 | 692,888 | 0 | 294,916 | 29,540 | 851,285 | 1,155 | 1,869,784 |
| 1974 | 423,982 | 450,093 | 874,075 | 0 | 412,453 | 31,493 | 963,956 | 2,118 | 2,284,095 |
| 1975 | 670,492 | 553,498 | 1,223,990 | 356 | 620,329 | 46,995 | 924,696 | 3,377 | 2,819,743 |
| 1976 | 631,876 | 741,126 | 1,373,002 | 4,147 | 547,538 | 103,546 | 1,018,653 | 1,745 | 3,048,631 |
| 1977 | 354,930 | 218,966 | 573,896 | 0 | 0 | 410,991 | 624,497 | 1,111 | 1,610,495 |
| 1978 | 782,625 | 529,740 | 1,312,365 | 0 | 16,215 | 177,245 | 836,864 | 1,691 | 2,344,380 |
| 1979 | 692,888 | 711,404 | 1,404,292 | 0 | 646,830 | 431,693 | 933,067 | 1,766 | 3,417,648 |
| 1980 | 726,545 | 784,946 | 1,511,491 | 52,200 | 350,017 | 40,269 | 925,750 | 2,131 | 2,881,858 |
| 1981 | 1,053,273 | 835,852 | 1,889,125 | 18,920 | 889,508 | 283,310 | 993,785 | 4,688 | 4,079,336 |
| 1982 | 916,014 | 822,042 | 1,738,056 | 140 | 214,994 | 144,267 | 819,586 | 4,646 | 2,921,689 |
| 1983 | 482,749 | 701,370 | 1,184,119 | 0 | 13,019 | 172,030 | 633,778 | 7,849 | 2,010,795 |
| 1984 | 725,799 | 861,794 | 1,587,593 | 3,663 | 259,254 | 366,273 | 891,128 | 7,040 | 3,114,951 |
| 1985 | 983,341 | 929,424 | 1,912,765 | 9,638 | 292,206 | 474,417 | 924,049 | 4,033 | 3,617,108 |
| 1986 | 998,611 | 1,009,295 | 2,007,906 | 2,595 | 21,755 | 177,176 | 843,040 | 3,865 | 3,056,337 |
| 1987 | 1,079,983 | 1,033,932 | 2,113,915 | 6,949 | 107,958 | 375,810 | 882,301 | 7,672 | 3,494,605 |
| 1988 | 1,308,071 | 1,068,302 | 2,376,373 | 0 | 0 | 520,375 | 884,877 | 4,889 | 3,786,514 |
| 1989 | 1,602,543 | 1,251,204 | 2,853,747 | 0 | 0 | 474,559 | 830,500 | 8,135 | 4,166,941 |
| 1990 | 1,876,072 | 706,079 | 2,582,151 | 0 | 90 | 424,697 | 875,099 | 9,262 | 3,891,299 |
| 1991 | 536,669 | 12,444 | 549,113 | 3,521 | 0 | 543,582 | 565,395 | 4,879 | 1,666,490 |
| 1992 | 955,687 | 455,112 | 1,410,799 | 1,156 | 0 | 166,992 | 613,978 | 2,605 | 2,195,530 |
| 1993 | 1,069,258 | 1,243,978 | 2,313,236 | 0 | 0 | 256,853 | 822,589 | 2,609 | 3,395,287 |
| 1994 | 1,134,992 | 614,359 | 1,749,351 | 48,150 | 64,475 | 236,739 | 874,018 | 8,200 | 2,980,933 |
| 1995 | 801,570 | 1,165,523 | 1,967,093 | 17,984 | 46,346 | 85,560 | 860,077 | 2,575 | 2,979,635 |
| 1996 | 1,143,638 | 1,371,186 | 2,514,824 | 12,091 | 16,556 | 252,346 | 1,005,148 | 3,907 | 3,804,872 |
| 1997 | 1,220,200 | 1,040,183 | 2,260,383 | 2,814 | 18,618 | 322,000 | 993,211 | 4,146 | 3,601,172 |
| 1998 | 865,795 | 860,724 | 1,726,519 | 9,982 | 10,306 | 127,405 | 872,738 | 2,108 | 2,749,058 |
| 1999 | 1,405,311 | 1,333,592 | 2,738,903 | 61,191 | 96,879 | 85,312 | 1,108,672 | 4,324 | 4,095,281 |
| 2000 | 1,968,161 | 1,231,745 | 3,199,906 | 170,302 | 138,483 | 333,384 | 1,085,886 | 4,030 | 4,931,991 |
| 2001 | 1,168,333 | 365,930 | 1,534,263 | 10,261 | 33,174 | 535,147 | 1,077,997 | 2,929 | 3,193,771 |
| 2002 | 1,849,052 | 715,805 | 2,564,857 | 9,502 | 27,663 | 272,277 | 1,131,880 | 3,694 | 4,009,873 |
| 2003 | 2,102,557 | 787,658 | 2,890,215 | 5,397 | 29,629 | 233,069 | 1,006,995 | 2,846 | 4,168,151 |
| 2004 | 1,951,657 | 643,342 | 2,594,999 | 103,890 | 112,949 | 341,922 | 1,171,835 | 2,865 | 4,328,460 |
| 2005 | 1,877,647 | 948,563 | 2,826,210 | 186,787 | 544,296 | 92,858 | 1,074,706 | 1,506 | 4,726,363 |
| 2006 | 1,973,268 | 998,583 | 2,971,851 | 293,358 | 327,981 | 119,405 | 1,112,551 | 1,936 | 4,827,082 |
| 2007 | 1,572,198 | 509,019 | 2,081,217 | 185,825 | 124,148 | 449,935 | 1,217,990 | 2,581 | 4,061,696 |
| 2008 | 1,015,241 | 218,999 | 1,234,240 | 2,729 | 0 | 488,818 | 1,109,563 | 2,778 | 2,838,128 |
| 2009 | 883,893 | 348,860 | 1,232,753 | 6,032 | 0 | 527,207 | 1,147,396 | 2,047 | 2,915,435 |
| Total | 41,622,465 | 29,529,233 | 71,151,698 | 1,239,580 | 7,311,267 | 10,465,558 | 38,877,956 | 146,235 | 129,192,294 |

^a Includes water conveyed for SWP and non-SWP water contractors.^b Includes amounts of water diverted according to various water rights agreements.

Power Resources

In 2009, DWR sold 1.53 million MWh of energy to 7 utilities and 19 WSPP power marketers for a total revenue of \$62.27 million. DWR also received \$55.33 million in revenues for capacity and other energy-related services, including \$53.52 million for transactions made through the California Independent System Operator. See Table 10-4 in Chapter 10, Power Resources, for information about energy sold and revenues from sales per contract agreements, including sales to the California Independent System Operator.

The sidebar, State Water Project Power Generation and Consumption in 2009, summarizes amounts of power generated and consumed by the SWP. For detailed information, see Chapter 10, Power Resources.

Oroville Facilities Relicensing

The original 50-year term Federal Energy Regulatory Commission (FERC) Project Number 2100 hydropower license for operation of the Oroville Facilities expired January 31, 2007. The project continued to operate under an annual license issued by FERC on February 1, 2009.

FERC issued the Final Environmental Impact Statement for the Oroville Facilities Project in May 2007. In July 2007, DWR submitted to the National Marine Fisheries Service (NOAA Fisheries), the combined Biological Assessment and Essential Fish Habitat Assessment. DWR certified the Oroville Facilities Relicensing Final Environmental Impact Report (EIR) in July 2008 and filed it with the State Water Resources Control Board (SWRCB). One month later, Butte and Plumas counties filed a lawsuit challenging the adequacy of the final EIR.

In 2009, SWRCB provided a draft water quality certification, and DWR reviewed the draft and submitted comments.

Formal consultation also continued with NOAA Fisheries on anadromous fish listed under the Endangered Species Act (ESA). NOAA Fisheries submitted a draft biological opinion to FERC in July 2009, and DWR provided comments in August. Additionally, in November, DWR and Pacific Gas & Electric Company submitted the draft Habitat Expansion Plan for Central Valley salmon and steelhead to signatories and stakeholders of the Habitat Expansion Agreement.

Settlement conferences were held in 2009 with Butte and Plumas counties related to their challenge of the final EIR.

For additional Oroville Facilities relicensing information, see Chapter 3, Environmental Programs, Chapter 6, Legislation and Litigation, and Chapter 10, Power Resources.

Financial Analysis

In 2009, DWR continued to pay bondholders as scheduled. The SWP was financially viable and was indirectly paid for by the approximately 25 million water users served by the project. Direct payment was through the 29 long-term water contractors. In 2009, the SWP handled approximately \$826 million in revenues and \$826 million in expenses. The 2009 Income Statement for the State Water Project sidebar presents a summary of the year's revenues and expenses. For detailed information, see Chapter 14, Financial Analysis.

Engineering, Construction, and Real Estate

In 2009, work to enhance, expand, repair, and protect SWP facilities continued. Significant projects included South Bay Aqueduct enlargement, South Bay Pumping Plant expansion, and feasibility studies for the East Branch Extension Phase I improvements and Phase II projects.

State Water Project Power Generation and Consumption in 2009

| Power Generation and Consumption | Millions of Kilowatt Hours |
|--|----------------------------|
| Energy generation by SWP facilities | 3,650 |
| Energy sources and firm purchases under agreements and exchanges | 3,970 |
| Total Energy Available to the SWP | 7,620 |
| Energy sales | (1,530) |
| Net SWP Power Consumption | 6,090 |

Design project studies, reports, and activities continued from previous reporting periods or initiated in 2009 for SWP facilities, including the:

- Oroville Facilities;
- South Bay Aqueduct;
- Coastal Aqueduct;
- Castaic, Pyramid, and Perris dams;
- East Branch Enlargement, Phase II;
- North Bay Aqueduct; and
- Sisk Dam.

DWR worked on 63 construction contracts in 2009. Projects included turbine and pump replacement, pipeline repair, trash rack upgrade at fish hatcheries, recreational and maintenance facility improvements at dam and reservoir sites, and habitat restoration.

In 2009, activities related to the Delta Habitat Conservation and Conveyance Program (DHCCP) included the following:

- submitting and updating draft seismic design criteria for review;

- continuing development of conceptual engineering reports;
- conducting notification regarding the on-land geotechnical drilling; and
- finalizing the DHCCP brochure.

DWR has spent a net total of \$255.1 million to acquire rights-of-way, recreation, and mitigation land for the SWP as of December 31, 2009. In 2009, DWR conducted real estate activities related to SWP acquisition, temporary permits, property management, and appraisals.

For more information, see Chapter 12, Engineering, Construction, and Real Estate.

Delta Resources, Environmental Issues, and Water Quality

Delta Reform Act

In 2009, the Legislature and Governor enacted a bill package dealing with water

2009 Income Statement for the State Water Project

| Revenues | Thousands of Dollars |
|---|----------------------|
| Water Contract Payments | 883,575 |
| Revenue Bond Cover Adjustments | (53,400) |
| Rate Management Adjustments | (19,985) |
| Other Revenues | 15,496 |
| Total Operating Revenues | 825,686 |
| Expenses | |
| Project Operations, Maintenance, Power, and Replacement | 554,316 |
| Deposits to Reserves | 5,181 |
| Water Bond Principal | 152,091 |
| Water Bond Interest | 114,098 |
| Total Operating Expense and Debt Service | 825,686 |
| Net System Revenues | 0 |

policy and the Delta. Among other things, Senate Bill X7 1 enacted the Sacramento-San Joaquin Delta Reform Act of 2009. Programs authorized by the act were designed according to the recommendations in the *Delta Vision Strategic Plan*. The Delta Reform Act created two new agencies, the Delta Stewardship Council and the Sacramento-San Joaquin Delta Conservancy. The bill also amended key provisions governing the organization and operations of the Delta Protection Commission.

Delta Risk Management Strategy

DWR released the *Delta Risk Management Strategy Phase 1 Report* in March 2009. The report assesses major risks to Delta

levees from floods, seepage, subsidence, and earthquakes.

South Delta Improvements Program Temporary Barrier Facilities

In 2009, the three agricultural barriers at Middle River near Victoria Canal, Grant Line Canal, and Old River near Tracy were installed and operated as planned. However, due to a 2008 court order (Wanger Decision) to protect delta smelt, installation of the spring Head of Old River physical rock barrier was prohibited. In lieu of a rock barrier, DWR installed a nonphysical barrier comprised of sound projectors, strobe lights, and perforated pipe (to create an air bubble curtain). The nonphysical barrier was tested

to determine its effectiveness to prevent the outmigrating juvenile salmon from entering the South Delta via Old River.

CVP/SWP Long-term Operations Criteria and Plan—Biological Opinions and Take Authorizations

The SWP and CVP obtained take authorization for ESA and California Endangered Species Act listed species for coordinated operations in the Delta through a Department of Fish and Wildlife incidental take permit for longfin smelt (February 2009); take authorization for delta smelt (July 2009) and winter-run and spring-run Chinook salmon (September 2009); and a NOAA Fisheries biological opinion for salmon, steelhead, and green sturgeon (June 2009).

Quagga Mussel Monitoring

In 2009, DWR continued to participate in a multiagency effort to prevent the spread of quagga mussels, manage and control existing populations, monitor waterbodies for new populations, and provide public outreach and education.

In 2009, DWR and collaborating water agencies continued to monitor the California Aqueduct, SWP reservoirs, and the Sacramento-San Joaquin Delta for the presence of quagga and zebra mussels. No mussels were detected in the SWP, the Delta, or other SWP source waters.

Status of Threatened or Endangered Species Listings

North American Green Sturgeon

In October 2009, the final critical habitat designation for the threatened Southern distinct population segment of North American green sturgeon was published by NOAA Fisheries in the Federal Register. The critical habitat designation includes the Sacramento River, lower Feather River, lower Yuba River, Sacramento-San Joaquin

Delta, and Suisun, San Pablo, and San Francisco bays.

Delta Smelt

In 1993, delta smelt was designated as threatened under the ESA. In 2006, the Center for Biological Diversity, the Bay Institute, and the Natural Resources Defense Council petitioned the U.S. Fish and Wildlife Service to change the delta smelt status from threatened to endangered under the ESA. On March 4, 2009, the Fish and Game Commission adopted regulations upgrading the delta smelt's status from threatened to endangered under the California Endangered Species Act.

Water Quality

The goal of DWR's Real Time Data and Forecasting Comprehensive Program (RTDF-CP) is to develop the capability for real-time data and forecasting of short- and long-term source drinking water quality conditions in the Delta and SWP. In December 2009, the RTDF-CP began publishing daily web-based summaries of water quality and flow at key locations in the Delta.

SWP Security Measures

Security and protection of the SWP remain primary goals for DWR. SWP facilities are closely monitored and DWR staff are vigilant in maintaining a secure environment. Security patrols of SWP facilities are frequent and ongoing, and plans are in place to address potential or actual acts of terrorism. Security system improvements continue in conjunction with Reclamation and other federal and State agencies.

SWP Milestones through the Decades

Fifty Years Ago—1959

State engineers recommend alternative routes for aqueduct systems to serve Southern California.

The Legislature approved the Water Resources Development Bond Act (known as the Burns-Porter Act) on July 10, which provided initial funding of \$1.75 billion in general obligation bonds to fund construction of the SWP.

Forty Years Ago—1969

Oroville Dam and Hyatt Powerplant were selected as the “Outstanding Civil Engineering Achievement of 1969” by the American Society of Civil Engineers. On July 12, 1969, a bronze plaque was formally dedicated atop the dam’s crest to commemorate the selection.

Construction of both Del Valle Pumping Plant and Clifton Court Forebay were completed in December.

Thirty Years Ago—1979

The California Cooperative Snow Surveys Program celebrated its golden anniversary, as did the Dam Safety program.

The Office of Water Conservation was established to bring together urban and agricultural conservation efforts.

The Delta Pumping Plant Fish Facility was renamed in early 1979 in memory of John E. Skinner, a long-time Department of Fish and Wildlife biologist who was a national authority on fish protective facilities and striped bass research.

In May, construction began on the Suisun Marsh Initial Facilities: the Roaring River Slough Distribution System and Goodyear Slough Outfall.

Twenty Years Ago—1989

Entering the third year of a severe drought, DWR published Drought Contingency Planning Guidelines in January to coordinate the actions of the California water community in the event the drought continued through 1989.

Following a year of operation to test the gates, the Suisun Marsh Salinity Control Gates began officially operating in November.

Ten Years Ago—1999

Construction of Phase I of the East Branch Extension for San Bernardino and Riverside counties started on February 26, 1999. The official groundbreaking ceremony took place on August 23.

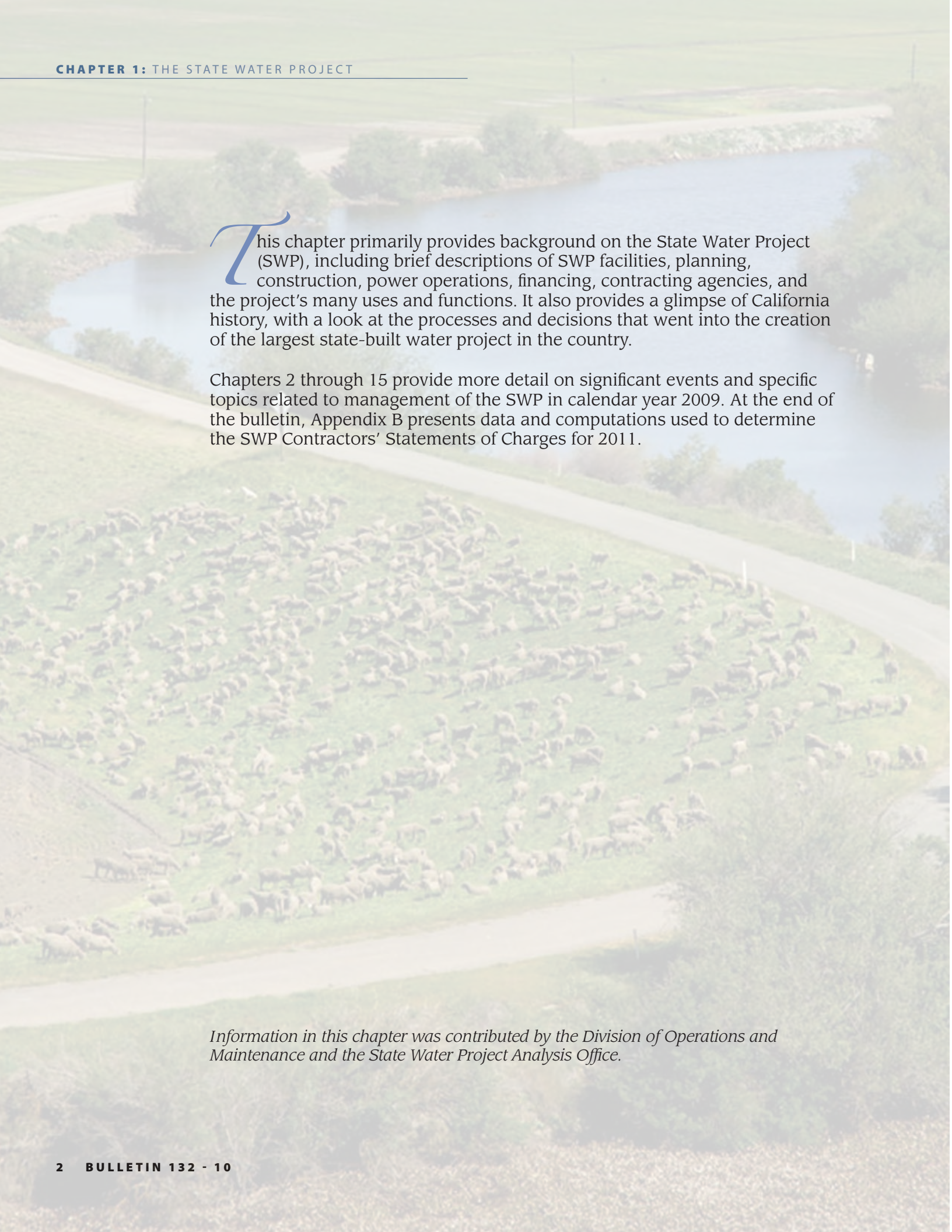
In December, the *State Water Project Atlas* was published. This multicolor, highly illustrated reference book describes the major features of the SWP.



Chapter 1

The State Water Project

Agriculture and livestock in the Sacramento-San Joaquin Delta.

An aerial photograph showing a vast green field filled with a large herd of sheep. In the background, there is a body of water, possibly a reservoir or lake, surrounded by trees and a paved road. The scene is captured from a high angle, providing a wide view of the landscape.

This chapter primarily provides background on the State Water Project (SWP), including brief descriptions of SWP facilities, planning, construction, power operations, financing, contracting agencies, and the project's many uses and functions. It also provides a glimpse of California history, with a look at the processes and decisions that went into the creation of the largest state-built water project in the country.

Chapters 2 through 15 provide more detail on significant events and specific topics related to management of the SWP in calendar year 2009. At the end of the bulletin, Appendix B presents data and computations used to determine the SWP Contractors' Statements of Charges for 2011.

Information in this chapter was contributed by the Division of Operations and Maintenance and the State Water Project Analysis Office.

California's diverse geography contains both the highest and lowest elevations in the coterminous United States, with a resulting diversity of climate that ranges from desert to alpine to subtropical. In a typical year, some areas receive as little as 2 inches of rain, while others receive more than 100 inches. This diversity of geography and climate creates an intricate and constantly changing pattern of water supplies, which, in turn, creates enormous challenges in managing this vital resource.

The State Water Project

Like present-day Californians, the earliest settlers faced the problem of how best to conserve, control, and deliver water. Remains of aqueducts, canals, and dams are still found near some of California's original missions. The first recorded aqueduct, built in 1770 to serve the San Diego mission, was 6 miles long. In the early twentieth century, several cities, including San Francisco and Los Angeles, built aqueducts to convey water from the Sierra Nevada to other parts of the State.

In 1951, after many years of discussion and study, the Legislature authorized construction of a water storage and supply system to capture and store rainfall and snowmelt runoff in Northern California and deliver it to areas of need throughout the State. Eight years later, the Legislature passed the Burns-Porter Act, which provided the mechanism for obtaining funds necessary to construct the initial State Water Project (SWP) facilities. In 1960, California voters approved an issue of \$1.75 billion in general obligation bonds, as authorized in the act, thereby securing funds to build the SWP. In 1962, the first water was delivered through a portion of the South Bay Aqueduct to two long-term contracting agencies in Alameda County.

Today the SWP, built, operated, and managed by the Department of Water Resources (DWR), is the largest state-built,

multipurpose, user-financed water project in the country. It was designed and built to deliver water, control flooding, generate power, provide recreational opportunities, and enhance habitat for fish and wildlife. SWP water irrigates about 750,000 acres of farmland, mainly in the southern San Joaquin Valley. Approximately 25 million of California's estimated 37 million residents benefit from SWP water.

Precipitation and Runoff

The water stored and delivered by the SWP originates from rainfall and snowmelt runoff in Northern and Central California's watersheds, where most of the State's precipitation occurs.

Since 1968, DWR has monitored and recorded annual precipitation and runoff, because precipitation, snowpack, and the rate and amount of snowmelt help determine how much water the SWP can deliver in any given year. The DWR-designated water year is October 1 through September 30.

Water Delivery Facilities

The SWP depends on a complex system of dams, reservoirs, power plants, pumping plants, canals, and aqueducts to deliver water. Although initial water transportation facilities were essentially completed in 1973, other facilities have since been built, and still others are either under construction or are planned to be built, as needed.

The SWP facilities include 30 dams (29 of which impound water), 20 reservoirs, 29 pumping and generating plants, and approximately 700 miles of aqueducts in total. Figure 1-1 shows the names and locations of primary water delivery facilities.

Existing long-term SWP water supply contracts call for the annual delivery of up to 4,166,376 acre-feet (af) of Table A water during 2009, gradually increasing to a maximum of 4,172,786 af by 2016. Some changes have occurred since the long-term water contracts were signed in the 1960s, including population growth variations, differences in local water use, local water conservation programs, and conjunctive-use programs. The SWP delivered 1,053,253 af of approved 2009 Table A water to long-term SWP water contractors' service areas in 2009. Demands for SWP water are expected to increase as California's population continues to grow.

Project Design

Water from rainfall and snowmelt runoff is stored in SWP conservation facilities and delivered via SWP transportation facilities to water agencies and districts in the Southern California, Central Coastal, San Joaquin Valley, South Bay, North Bay, and Upper Feather River areas.

Three small reservoirs—Lake Davis, Frenchman Lake, and Antelope Lake—are the northernmost SWP facilities. Situated on Feather River tributaries in Plumas County, these lakes are used primarily for recreation. They also provide water to the City of Portola and local agencies that have water rights agreements with DWR.

Downstream from these lakes lies Lake Oroville, which conserves water from the Feather River watershed. Created by Oroville Dam, the tallest earthfill dam in the Western Hemisphere, Lake Oroville is the project's

largest storage facility with a capacity of about 3.5 million af.

Releases from Lake Oroville flow down the Feather River into the Sacramento River, which drains the northern portion of California's great Central Valley. The Sacramento River flows into the Sacramento-San Joaquin Delta, comprising 738,000 acres of land interlaced with channels that receive runoff from 40 percent of the State's land area. The SWP, federal Central Valley Project (CVP), and local agencies all divert water from the Delta.

From the northern Delta, Barker Slough Pumping Plant diverts water for delivery to Napa and Solano counties through the North Bay Aqueduct, which was completed in 1988. Near Byron, in the southern Delta, the SWP diverts water into Clifton Court Forebay for delivery south of the Delta. Banks Pumping Plant lifts water from Clifton Court Forebay into the California Aqueduct, which flows to Bethany Reservoir. From Bethany Reservoir, the South Bay Pumping Plant lifts water into the South Bay Aqueduct to supply Alameda and Santa Clara counties. The South Bay Aqueduct provided initial deliveries in 1962 and has been fully operational since 1965.

Most of the water delivered to Bethany Reservoir from Banks Pumping Plant flows into the California Aqueduct. This 444-mile-long main aqueduct conveys water to the agricultural lands of the San Joaquin Valley and to the urban regions of Southern California.

The California Aqueduct winds along the west side of the San Joaquin Valley. It transports water to O'Neill Forebay, Gianelli Pumping-Generating Plant, and San Luis Reservoir. San Luis Reservoir has a storage capacity of more than 2 million af and is jointly owned by DWR and the Bureau of Reclamation (Reclamation). DWR's share of gross storage in the reservoir is 1,062,183 af. Generally, water is pumped into San Luis



Figure 1-1 Names and Locations of Primary Water Delivery Facilities, December 31, 2009

Reservoir from late fall through early spring, where it is temporarily stored for release back to the California Aqueduct to meet summertime peaking demands of SWP and CVP water contractors.

SWP water not stored in San Luis Reservoir and water released from San Luis flows south through the San Luis Canal, a portion of the California Aqueduct jointly owned by DWR and Reclamation.

As the water flows through the San Joaquin Valley, numerous turnouts convey it to farmlands within the service areas of the SWP and CVP. Along its journey, this water is lifted more than 1,000 feet by four pumping plants—Dos Amigos, Buena Vista, Teerink, and Chrisman—before reaching the foot of the Tehachapi Mountains.

In the southern San Joaquin Valley, near Kettleman City, Phase I of the Coastal Branch Aqueduct serves agricultural areas west of the California Aqueduct. In August 1997, completion of Phase II extended the Coastal Branch Aqueduct to serve municipal and industrial water users in San Luis Obispo and Santa Barbara counties.

The remaining water conveyed by the California Aqueduct is delivered to Southern California, home to roughly two-thirds of California's population. Before it can be delivered, the water must first cross the Tehachapi Mountains. Fourteen 80,000-horsepower pumps at Edmonston Pumping Plant, situated at the foot of the mountains, raise the water 1,926 feet—the highest single lift of any pumping plant in the world. The water enters 8.5 miles of tunnels and siphons as it flows into Antelope Valley, where the California Aqueduct divides into two branches: the East Branch and the West Branch.

The East Branch carries water through Alamo Powerplant, Pearblossom Pumping Plant, and Mojave Siphon Powerplant into

Silverwood Lake in the San Bernardino Mountains. From Silverwood Lake, water flows through the San Bernardino Tunnel to Devil Canyon Powerplant. Water continues down the East Branch through the Santa Ana Pipeline to Lake Perris, the southernmost SWP reservoir.

The East Branch Extension is a nearly 33-mile pipeline linking parts of service areas for San Bernardino Valley Municipal Water District and San Geronimo Pass Water Agency to the California Aqueduct. The East Branch Extension, Phase I, carries water from Devil Canyon Powerplant Afterbay to Cherry Valley, bringing water to Yucaipa, Calimesa, Beaumont, Banning, and other communities. Phase II, when completed, will assist with this delivery.

Water in the West Branch flows through Oso Pumping Plant, Quail Lake, and then from the Peace Valley Pipeline through Warne Powerplant into Pyramid Lake in Los Angeles County. From there it flows through the Angeles Tunnel, Castaic Powerplant, Elderberry Forebay, and into Castaic Lake, terminus of the West Branch. Castaic Powerplant is operated by the Los Angeles Department of Water and Power.

The energy needed to operate the SWP, the largest single user of electrical power in California, comes from a combination of its own hydroelectric and coal-fired generating plants and power purchased from and exchanged with other utilities. The coal-fired plant and the project's eight hydroelectric power plants, including four pumping-generating plants, produce enough electricity in a normal year to supply about two-thirds of the SWP's necessary operating power.

Tables 1-1 through 1-5 present statistical information about primary storage facilities, primary dams, pumping plants, power plants, and aqueducts.

Table 1-1 Physical Characteristics of Primary Storage Facilities

| Facility | Data at Absolute Maximum Elevation | | |
|---------------------------|------------------------------------|----------------------|-------------------|
| | Gross Capacity (Acre-feet) | Surface Area (Acres) | Shoreline (Miles) |
| Antelope Lake | 22,600 | 930 | 15 |
| Frenchman Lake | 55,500 | 1,580 | 21 |
| Lake Davis | 84,400 | 4,030 | 32 |
| Lake Oroville | 3,537,600 | 15,810 | 167 |
| Thermalito Forebay | 11,800 | 630 | 10 |
| Thermalito Afterbay | 57,000 | 4,300 | 26 |
| Thermalito Diversion Pool | 13,400 | 320 | 10 |
| Clifton Court Forebay | 31,300 | 2,180 | 8 |
| Bethany Reservoir | 5,100 | 180 | 6 |
| Lake del Valle | 77,100 | 1,060 | 16 |
| San Luis Reservoir | 2,027,800 | 12,520 | 65 |
| SWP storage, 1,062,183 af | | | |
| O'Neill Forebay | 56,400 | 2,700 | 12 |
| SWP storage, 29,500 af | | | |
| Los Banos Reservoir | 34,600 | 620 | 12 |
| Little Panoche Reservoir | 5,600 | 190 | 6 |
| Quail Lake | 7,600 | 290 | 3 |
| Pyramid Lake | 171,200 | 1,300 | 21 |
| Elderberry Forebay | 32,500 | 500 | 7 |
| Castaic Lake | 323,700 | 2,240 | 29 |
| Silverwood Lake | 75,000 | 980 | 13 |
| Lake Perris | 131,500 | 2,320 | 10 |

Future Planning and Construction

SWP aqueduct facilities were initially designed and constructed to provide service to all agencies to meet their water delivery needs up to 1990. Project water conservation reservoirs were planned to be constructed in stages as water demands increased. Oroville and San Luis were the first SWP conservation reservoir facilities constructed. Additional facilities were scheduled to meet increased demands. It was anticipated that population

growth in delivery service areas and water supply areas of origin would influence the final schedule for additional SWP facilities. Increasingly, issues such as escalating costs, environmental concerns, and increased non-SWP demands for limited water supplies have become important factors affecting the planning and construction of new facilities.

In response to changes in water management policy, DWR continues to reassess plans for additional facilities that will incorporate increased environmental safeguards while also increasing the SWP delivery yield. Developing these plans involves the time consuming process of finding technically suitable projects and satisfying many complex and dynamic environmental procedures, laws, and regulations.

Planners are also concerned about climate change and its potentially serious effects on water resources. Temperature increases may affect water demand and aquatic ecosystems. Projected increases in air temperature may lead to changes in the amount, timing, and form of precipitation—rain or snow, changes in the volume and timing of runoff, Delta water quality changes due to sea-level rise, and changes in the amount of irrigation water needed due to modified evapotranspiration rates.

The ability of the SWP and CVP to meet the water demands of their customers and the environment depends on the accumulation of mountain snow and subsequent spring and summer snowmelt runoff. A warming climate may reduce this natural water storage mechanism.

To address these concerns, DWR and Reclamation formed a joint Climate Change Work Team to provide qualitative and quantitative assessments of the potential risks and effects of climate change on California's water resources. The team will

Table 1-2 Physical Characteristics of Primary Dams

| Facility | Crest Elevation (Feet) | Structural Height (Feet) | Crest Length (Feet) | Structural Volume (Thousand Cubic Yards) |
|--------------------------|------------------------|--------------------------|---------------------|--|
| Antelope | 5,025 | 120 | 1,320 | 380 |
| Frenchman | 5,607 | 139 | 720 | 537 |
| Grizzly Valley | 5,785 | 132 | 800 | 253 |
| Oroville | 922 | 770 | 6,920 | 80,000 |
| Thermalito Diversion | 233 | 143 | 1,300 | 154 |
| Thermalito Forebay | 231 | 91 | 15,900 | 1,840 |
| Thermalito Afterbay | 142 | 39 | 42,000 | 5,020 |
| Clifton Court Forebay | 14 | 30 | 36,500 | 2,440 |
| Bethany | 250 | 121 | 3,940 | 1,400 |
| Del Valle | 773 | 235 | 880 | 4,150 |
| Sisk | 554 | 385 | 18,600 | 77,645 |
| O'Neill Forebay | 233 | 88 | 14,350 | 3,000 |
| Los Banos Detention | 384 | 167 | 1,370 | 2,100 |
| Little Panoche Detention | 676 | 152 | 1,440 | 1,210 |
| Pyramid | 2,606 | 400 | 1,090 | 6,800 |
| Elderberry Forebay | 1,550 | 200 | 1,990 | 6,000 |
| Castaic | 1,535 | 425 | 4,900 | 46,000 |
| Cedar Springs | 3,378 | 249 | 2,230 | 7,600 |
| Perris | 1,600 | 128 | 11,600 | 20,000 |
| Crafton Hills | 2,932 | 95 | 500 | 144 |

Table 1-3 Pumping Plant Characteristics

| Facility | Number of Units | Normal Static Head (Feet) | Total Flow at Design Head (cfs) | Total Motor Rating (hp) |
|---------------------------|----------------------|---------------------------|---------------------------------|-------------------------|
| Thermalito | 3 (p-g) ^a | 85-102 | 9,120 | 120,000 |
| Hyatt | 3 (p-g) ^a | 500-625 | 5,610 | 519,000 |
| Barker Slough | 9 | 95-120 | 228 | 4,800 |
| Cordelia | 11 | 138 | | |
| Banks | 11 | 236-252 | 10,670 | 333,000 |
| South Bay | 9 | 566 | 330 | 27,750 |
| Del Valle | 4 | 0-38 | 120 | 1,000 |
| Gianelli | 8 (p-g) ^a | 99-327 | 11,000 | 504,000 |
| Dos Amigos | 6 | 107-125 | 15,450 | 240,000 |
| Las Perillas | 6 | 55 | 461 | 4,050 |
| Badger Hill | 6 | 151 | 454 | 11,750 |
| Devil's Den ^b | 6 | 521 | 134 | 10,500 |
| Bluestone ^b | 6 | 484 | 134 | 10,500 |
| Polonio Pass ^b | 6 | 533 | 134 | 10,500 |
| Buena Vista ^b | 10 | 205 | 5,405 | 144,500 |
| Teerink ^b | 9 | 233 | 5,445 | 150,000 |
| Chrisman ^b | 9 | 518 | 4,995 | 330,000 |
| Edmonston ^b | 14 | 1,926 | 4,480 | 1,120,000 |
| Oso | 8 | 231 | 3,252 | 93,800 |
| Pearblossom | 9 | 540 | 2,575 | 203,200 |
| Greenspot | 4 | 382 | 50 | 3,900 |
| Crafton Hills | 3 | 613 | 40 | 4,000 |
| Cherry Valley | 2 | 130 | 75 | 300 |

^aThe term p-g indicates pumping-generating units.^bThese plants have one unit in reserve.

Table 1-4 Power Plant Characteristics, by Type and Facility

| Type and Facility | Number of Units | Normal Static Head (Feet) | Total Flow at Design Head (cfs) | Net Dependable Capacity (MW) | Nameplate Capacity (MW) |
|--|------------------------|---------------------------|---------------------------------|------------------------------|-------------------------|
| Hydro | | | | | |
| Thermalito Diversion Dam | 1 | 63-77 | 615 | 3 | 3 |
| Thermalito | 4 (3 p-g) ^a | 85-102 | 17,400 | 114 | 114 |
| Hyatt | 6 (3 p-g) ^a | 410-676 | 16,950 | 645 | 645 |
| Gianelli (total) | 8 p-g ^a | 99-327 | 16,960 | 363 | 424 |
| Alamo | 1 | 115-141 | 1,740 | 15 | 17 |
| Warne | 2 | 719-739 | 1,600 | 67 | 74 |
| Mojave Siphon | 3 | 81-136 | 2,880 | 29 | 30 |
| Devil Canyon | 4 | 1,406 | 2,940 | 235 | 276 |
| Castaic ^d | 7 (6 p-g) ^a | 900-1,050 | 20,820 | 1,128 | 1,254 |
| Coal | | | | | |
| Reid Gardner, Unit 4 (total) SWP share of generation ^c | 1 ^b | | | 234 | 275 |

^a The term p-g indicates pumping-generating units.^b Life of the plants is expected to extend through 2013.^c SWP ownership share in Reid Gardner, Unit 4, is 67.8%.^d Castaic Pumping-Generating Plant is owned and operated by the Los Angeles Department of Water and Power.**Table 1-5 Total Miles of Aqueducts**

| Facility | Channel and Reservoir | Canal and Siphon | Pipeline and Discharge Line | Tunnel | Total |
|--|-----------------------|------------------|-----------------------------|-------------|--------------|
| Grizzly Valley Pipeline | 0.0 | 0.0 | 6.0 | 0.0 | 6.0 |
| Thermalito Power Canal and Tail Channel | 1.5 | 1.9 | 0.0 | 0.0 | 3.4 |
| North Bay Aqueduct | 0.0 | 0.0 | 27.6 | 0.0 | 27.6 |
| South Bay Aqueduct (including Del Valle Branch) | 0.3 | 10.7 | 31.9 | 1.7 | 44.6 |
| <i>Subtotal</i> | <i>1.8</i> | <i>12.6</i> | <i>65.5</i> | <i>1.7</i> | <i>81.6</i> |
| California Aqueduct | | | | | |
| Clifton Court Forebay to O'Neill Forebay | 4.5 | 61.9 | 0.3 | 0.0 | 66.7 |
| O'Neill Forebay to Kettleman City | 4.1 | 101.4 | 0.2 | 0.0 | 105.7 |
| Kettleman City to Edmonston Pumping Plant | 0.0 | 120.1 | 0.9 | 0.0 | 121.0 |
| Edmonston Pumping Plant to Tehachapi Afterbay | 0.0 | 0.2 | 1.9 | 7.9 | 10.0 |
| Tehachapi Afterbay to Lake Perris | 4.0 | 97.8 | 34.3 | 3.9 | 140.0 |
| <i>Subtotal</i> | <i>12.6</i> | <i>381.4</i> | <i>37.6</i> | <i>11.8</i> | <i>443.4</i> |
| California Aqueduct Branches | | | | | |
| Coastal Branch | 0.0 | 14.1 | 98.7 | 2.7 | 115.5 |
| West Branch | 9.7 | 9.3 | 5.8 | 7.1 | 31.9 |
| East Branch Extension | | | | | |
| Devil Canyon Powerplant to Greenspot Pumping Station | 0.0 | 0.0 | 16.2 | 0.0 | 16.2 |
| Greenspot Pumping Station to Noble Creek Terminus | 0.0 | 0.0 | 16.4 | 0.0 | 16.4 |
| <i>Subtotal</i> | <i>9.7</i> | <i>23.4</i> | <i>137.1</i> | <i>9.8</i> | <i>180.0</i> |
| Total | 24.1 | 417.4 | 240.2 | 23.3 | 705.0 |

regularly update decision makers on climate change impacts, the ability of existing facilities to accommodate these impacts, and available mitigation measures.

In response to changes brought about by population growth, environmental concerns, climate change, and other factors, DWR continues to plan, design, and construct transportation and power-producing facilities for the SWP. For information on current SWP planning and construction, see Chapter 12, Engineering, Construction, and Real Estate. Information about prior construction activities can be found in previous issues of Bulletin 132.

Methods of Financing

Project facilities have been constructed with several general types of financing: general obligation bonds and tideland oil revenues (under the Burns-Porter Act, which was approved by the Legislature in 1959, and the bond issue approved by voters in 1960); revenue bonds; and capital resources revenues. Repayment of these funds, and the operations, maintenance, power, and replacement costs associated with water supply, are paid by the 29 agencies and districts that have long-term contracts with DWR for the delivery of SWP water. Costs are repaid as debt service on the bonds comes due.

Long-term Contracting Agencies

From 1963 through 1967, 32 agencies or districts signed long-term water supply contracts with DWR. However, in 1965, the City of West Covina was annexed to the Metropolitan Water District of Southern California, and in 1981, Hacienda Water District was assigned to Tulare Lake Basin Water Storage District. On January 1, 1992, Castaic Lake Water Agency assumed all rights and obligations granted to Devil's

Den Water District in accordance with its long-term water supply contract. Therefore, only 29 agencies and districts have long-term contracts with DWR as of December 31, 2009.

The contracts initially provided for a combined maximum annual Table A amount of 4,230,000 af of water supply. As a result of contract amendments in the 1980s and the Monterey Amendment, the current combined maximum annual Table A amount by 2016 totals 4,172,786 af. The contracts are in effect for the longest of the following periods:

- the project repayment period, which extends to the year 2035;
- 75 years from the date of the contract; or
- the period ending with the latest maturity date of any bond used to finance the construction costs of project facilities.

Figure 1-2 shows the name and location of each contracting agency and district and lists the first year of SWP delivery service for each. Table 1-6 presents more detailed information about each contracting agency.

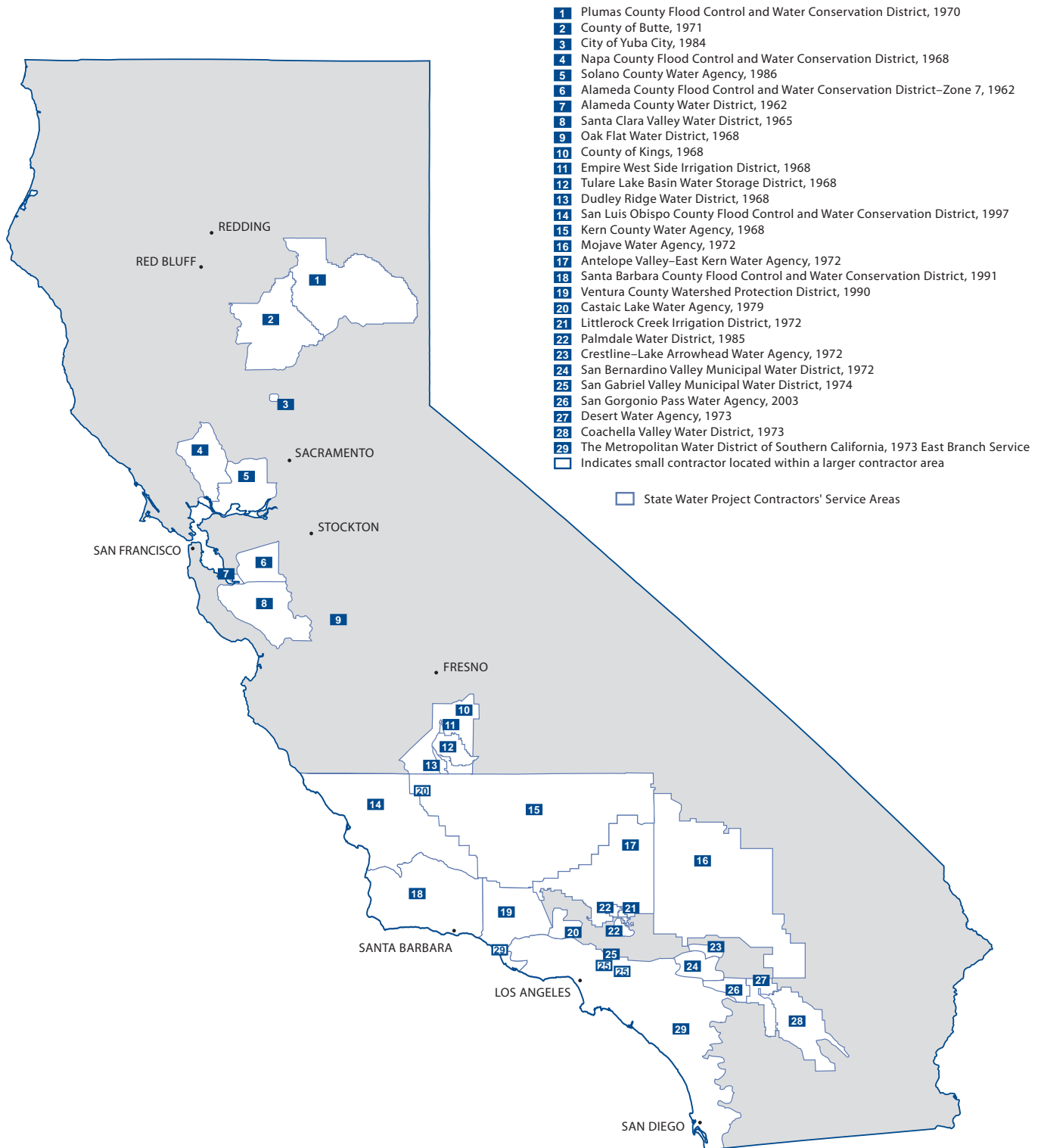


Figure 1-2 Names, Locations, and First Year of Service of Long-term Contracting Agencies, December 31, 2009

Table 1-6 Long-term Water Supply Contracting Agencies, by Area, as of December 31, 2009

| Contracting Agency | Cumulative Deliveries (af) ^a | Annual Table A (af) | Payments (Dollars) | Gross Area (Acres) | Assessed Valuation (Dollars) ^b | Estimated Population |
|--|---|---------------------|-----------------------|-------------------------------|---|----------------------|
| Upper Feather River Area | | | | | | |
| City of Yuba City | 28,864 | 9,600 | 4,955,386 | 9,332 | 4,400,000,000 | 63,338 |
| County of Butte | 33,748 | 27,500 | 2,875,144 | 1,049,280 | 18,361,000,000 | 219,335 |
| Plumas County Flood Control and WCD | 10,915 | 2,090 | 1,703,947 | 1,676,056 ^c | 2,060,744,342 | 21,200 |
| Subtotal | 73,527 | 39,190 | 9,534,477 | 2,734,668 | 24,821,744,342 | 303,873 |
| North Bay Area | | | | | | |
| Napa County Flood Control and WCD | 267,571 | 23,525 | 88,122,277 | 510,010 | 26,755,229,545 | 136,704 |
| Solano County Water Agency | 687,356 | 47,456 | 121,561,824 | 581,760 | 45,800,000,000 | 412,488 |
| Subtotal | 954,927 | 70,981 | 209,684,101 | 1,091,770 | 72,555,229,545 | 549,192 |
| South Bay Area | | | | | | |
| Alameda County Flood Control and WCD—Zone 7 | 1,326,929 | 80,619 | 176,764,845 | 275,900 | 41,531,000,000 | 216,000 |
| Alameda County WD | 1,159,575 | 42,000 | 106,312,808 | 67,200 | 47,605,330,333 | 323,000 |
| Santa Clara Valley WD | 3,678,705 | 100,000 | 323,451,899 | 849,000 | 296,474,111,554 | 1,764,499 |
| Subtotal | 6,165,209 | 222,619 | 606,529,552 | 1,192,100 | 385,610,441,887 | 2,303,499 |
| San Joaquin Valley Area | | | | | | |
| County of Kings | 125,736 | 9,305 | 6,760,482 | 893,300 | 8,843,215,645 | 154,743 |
| Castaic Lake Water Agency | 471,637 | 12,700 | — | 8,700 | 4,532,936 | 0 |
| Dudley Ridge WD | 2,155,938 | 57,343 | 78,970,115 | 37,600 | 87,100,000 | 36 |
| Empire West Side Irrigation District | 113,836 | 3,000 | 3,851,804 | 7,400 | | 11 |
| Kern County Water Agency | 32,761,521 | 998,730 | 1,738,602,931 | 5,224,000 | 84,161,663,000 | 770,300 |
| Oak Flat WD | 199,919 | 5,700 | 6,198,844 | 4,500 | | 10 |
| Tulare Lake Basin Water Storage District | 4,652,775 | 95,922 | 155,189,032 | 189,519 | 152,288,305 | 23 |
| Subtotal | 40,481,362 | 1,182,700 | 1,989,573,208 | 6,365,019 | 93,248,799,886 | 925,123 |
| Central Coastal Area | | | | | | |
| San Luis Obispo County Flood Control and WCD | 60,125 | 25,000 | 72,034,594 | 2,122,240 | 39,953,587,966 | 265,182 |
| Santa Barbara County Flood Control and WCD | 271,720 | 45,486 | 475,015,180 | 1,775,296 | 49,196,921,210 | 421,625 |
| Subtotal | 331,845 | 70,486 | 547,049,774 | 3,897,536 | 89,150,509,176 | 686,807 |
| Southern California Area | | | | | | |
| Antelope Valley-East Kern Water Agency | 1,734,177 | 141,400 | 442,543,549 | 1,525,547 | 22,215,181,258 | 282,698 |
| Castaic Lake Water Agency ^d | 787,572 | 95,200 | 270,966,236 | 124,800 | 34,988,555,503 | 259,200 |
| Coachella Valley WD | 1,013,564 | 121,100 | 321,836,189 | 639,857 | 55,401,982,267 | 283,529 |
| Crestline-Lake Arrowhead Water Agency | 52,638 | 5,800 | 24,452,895 | 54,777 | 2,783,533,372 | 29,959 |
| Desert Water Agency | 1,134,450 | 50,000 | 245,145,889 | 209,760 | 8,802,406,200 | 71,715 |
| Littlerock Creek Irrigation District | 20,787 | 2,300 | 6,041,287 | 10,000 | 448,038,751 | 2,900 |
| The Metropolitan WD of Southern California | 29,988,026 | 1,911,500 | 9,033,003,923 | 3,314,621 ^f | 2,103,656,331,845 | 18,559,751 |
| Mojave Water Agency | 309,711 | 75,800 | 240,091,695 | 3,118,720 | 31,903,028,096 | 453,297 |
| Palmdale WD | 222,584 | 21,300 | 69,438,872 | 119,680 | 1,892,738,418 | 102,025 |
| San Bernardino Valley Municipal WD | 710,262 | 102,600 | 503,575,195 | 225,230 | 42,206,951,593 | 657,722 |
| San Gabriel Valley Municipal WD | 350,731 | 28,800 | 136,226,298 | 18,297 | 11,720,110,333 | 210,145 |
| San Geronio Pass Water Agency | 21,938 | 17,300 | 102,917,826 | 140,800 | 581,148,848 | 75,000 |
| Ventura County Watershed Protection District | 53,494 | 20,000 | 54,735,872 | 308,252 | 25,763,165,853 | 460,000 |
| Subtotal | 36,399,934 | 2,593,100 | 11,450,975,726 | 9,810,341 | 2,342,363,172,337 | 21,447,941 |
| Total | 84,406,804 | 4,179,076 | 14,813,346,838 | 25,091,434^g | 3,007,749,897,173 | 26,216,435 |

^aAll water delivered to long-term SWP contractors, including carryover, Article 21, surplus, unscheduled, exchange, permit, purchased, local, and non-SWP water.^bStatutes of 1978, Chapter 1207, added Section 135 to the Revenue and Taxation Code, requiring assessment at 100% of full value for the 1981–1982 fiscal year and fiscal years thereafter.^cTotal of all Plumas County Flood Control and Water Conservation District, including Last Chance Creek Water District.^dAssessed valuation not available on an agency area breakdown.^eDistrict includes land in the San Joaquin Valley Area formerly known as Devil's Den Water District.^fTotal for Metropolitan, including Calleguas Municipal Water District, which is common to Metropolitan and Ventura County Watershed Protection District.^gIncludes duplicate values. Some areas that are within two or more agencies are included in each agency's total.



Chapter 2

Delta Resources

Sunset in the Delta.

Significant Events in 2009

The State Water Project and Central Valley Project obtained take authorization for Endangered Species Act and California Endangered Species Act listed species for coordinated operations in the Delta through a Department of Fish and Wildlife incidental take permit for longfin smelt in February 2009, and a National Marine Fisheries Service biological opinion for salmon, steelhead, and green sturgeon in June 2009.

In November 2009, Senate Bill X7 1 enacted the Sacramento-San Joaquin Delta Reform Act of 2009. Programs authorized by the act were designed according to the recommendations in the *Delta Vision Strategic Plan*.

Due to a 2008 court order to protect delta smelt, installation of the 2009 spring Head of Old River physical rock barrier was prohibited. In lieu of a rock barrier, Department of Water Resources installed a nonphysical barrier comprised of sound projectors, strobe lights, and perforated pipe (to create an air bubble curtain).

Information for this chapter was contributed by the FloodSAFE Environmental Stewardship and Statewide Resources Office, the Bay-Delta Office, and the Division of Flood Management.

The Sacramento-San Joaquin Delta is a unique environmental resource and a major source of water for millions of Californians. Over the past 40 years, the Department of Water Resources (DWR) and other State and federal agencies have developed and implemented numerous programs to manage the Delta.

DWR's water management programs focus on solving problems in three areas of the Sacramento-San Joaquin Delta: the North Delta, West Delta, and South Delta (see Figure 2-1).

These programs share common goals to:

- improve water supply reliability to the State Water Project (SWP), Central Valley Project (CVP), and Delta water users;
- determine levels of flow and salinity necessary to protect fish and wildlife habitat;
- devise methods to control flooding;
- protect fish and wildlife; and
- provide recreational activities.

Delta Water Management Programs

Future water deliveries to millions of Californians throughout the state will be affected by many factors, including two significant changes: Delta pumping restrictions and climate change. The first stage of the CALFED Bay-Delta Program (CALFED) Stage 1, implemented from 2000 through 2007, focused on conveying water supply through the Delta. Specific projects and studies were undertaken during CALFED Stage 1 to determine the feasibility of a through-Delta approach.

Four major concurrent Delta planning efforts were under way with objectives related to providing a sustainable Delta: Delta Vision, the Delta Risk Management Strategy, the CALFED Ecosystem Restoration Program

Conservation Strategy, and the Bay Delta Conservation Plan.

SWP and CVP obtained take authorization for Endangered Species Act and California Endangered Species Act listed species for coordinated operations in the Delta through a U.S. Fish and Wildlife Service (USFWS) biological opinion (BO) for delta smelt in December 2008, a Department of Fish and Wildlife (DFW; formerly Department of Fish and Game) incidental take permit for longfin smelt in February 2009, and a National Marine Fisheries Service (NOAA Fisheries) BO for salmon, steelhead, and green sturgeon in June 2009. Some of the requirements in these documents were implemented right away, while other requirements needed development of studies and projects before being implemented. The Bay-Delta Office and Division of Environmental Services had begun developing studies and projects. The operational requirements would be implemented by the Division of Operations and Maintenance.

Delta Vision

The Governor's Delta Vision Blue Ribbon Task Force issued the *Delta Vision Strategic Plan* in November 2008. It outlined strategies for addressing a range of threats facing the Delta and called for the Delta to be managed according to two coequal goals: "Restore the Delta ecosystem and create a more reliable water supply for California."

Following the release of the strategic plan, the Delta Vision Committee held two workshops to solicit public opinion on implementation recommendations. On

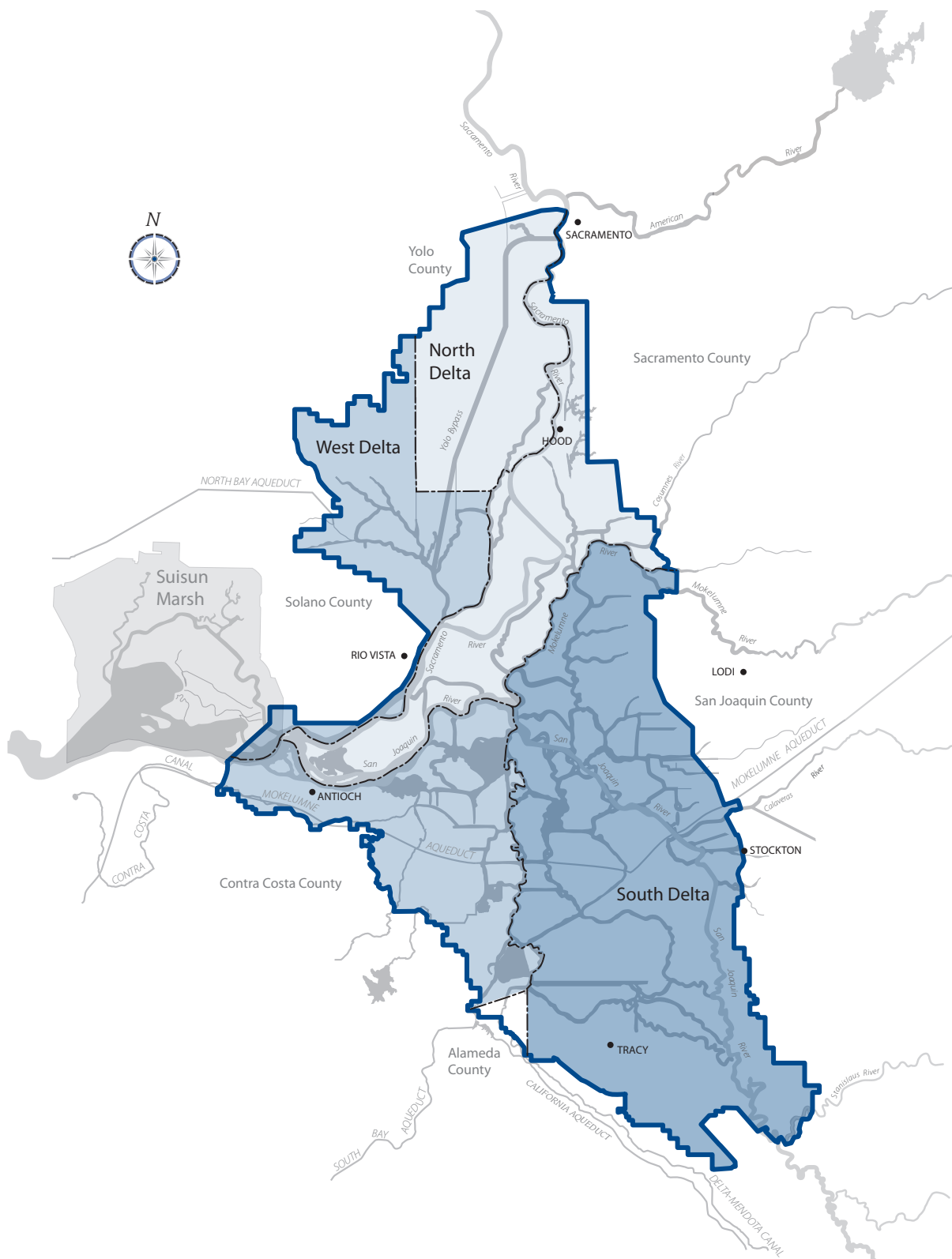


Figure 2-1 The North, West, and South Delta as Defined in Public Resources Code Section 29735

December 15, 2008, the committee met in its final session to finalize its implementation recommendations to the Governor. In 2009, the Legislature and Governor enacted a bill package dealing with water policy and the Delta. Among other things, Senate Bill X7 1 enacted the Sacramento-San Joaquin Delta Reform Act of 2009. Programs authorized by the act were designed according to the recommendations in the strategic plan. The Delta Reform Act created two new agencies, the Delta Stewardship Council and the Sacramento-San Joaquin Delta Conservancy. The bill also amended key provisions governing the organization and operations of the Delta Protection Commission.

The Delta Stewardship Council would implement the coequal goals of water supply reliability and ecosystem restoration described in the strategic plan. The Delta Stewardship Council replaces the function of CALFED and the California Bay Delta Authority. The Delta Reform Act requires the Delta Stewardship Council to adopt a comprehensive management plan for the Delta (Delta Plan) by January 2011. Additionally, the Delta Reform Act includes requirements in connection with the preparation of the Bay Delta Conservation Plan and could be permitted to be incorporated in the Delta Plan if certain requirements are met.

For more information regarding the Delta Reform Act, visit the California legislative information website, the Delta Stewardship Council website, or the Delta Vision website.

Delta Risk Management Strategy

DWR released the *Delta Risk Management Strategy Phase 1 Report* in March 2009. The Delta Risk Management Strategy project was placed on hold during calendar year 2009 due to economic challenges faced by the State of California and direction received from the Governor. Therefore, no further developments or changes occurred on the project during calendar year 2009.

North Delta Program

Since 2003, DWR has been involved in evaluating several proposed modifications included in the CALFED record of decision. These modifications include changes in the North Delta's conveyance facilities to improve Delta water quality, fisheries, and water supply reliability, as well as improvements to flood protection and ecosystem health.

CALFED North Delta actions include:

- evaluation and implementation of improved operational procedures for the Delta Cross Channel to address fishery and water quality concerns;
- evaluation of a screened through-Delta facility on the Sacramento River of up to 4,000 cubic feet per second (cfs);
- evaluation of flow and salinity in Franks Tract to improve fish protection and improve water quality through installation of operable barriers in the Franks Tract region; and
- design and construction of floodway improvements to provide conveyance, flood control, and ecosystem health (North Delta Flood Control and Ecosystem Restoration Project).

In 2009, work on several projects was suspended as a result of the State's fiscal crisis. The Delta Regional Salmon Outmigration Study, undertaken as part of the Delta Cross Channel evaluations to address fishery and water quality concerns, was not completed. The last phase of the field study and subsequent data analysis were suspended.

The environmental impact statement (EIS)/ environmental impact report (EIR) for the Franks Tract Project, which involves installation of operable barrier(s) in river channel(s) around the Franks Tract region to reduce sea water intrusion and enhance conditions for sensitive fish species, was

also suspended. However, the Bureau of Reclamation (Reclamation) completed the North/Central Delta Improvement Study and associated *Initial Alternatives Information Report*. In addition, Reclamation initiated work on the *Plan Formulation Report* and the feasibility study for the project. DWR staff completed preparation of the *Franks Tract Project Scoping Report* (May 2009) and an initial economic analysis identifying the potential benefits of the project.

For more information about North Delta Program activities, see Chapter 7, Water Supply Development and Reliability, or DWR's website.

North Delta Flood Control and Ecosystem Restoration Project

The North Delta Flood Control and Ecosystem Restoration Project (NDFCERP) provides flood control improvements and ecosystem restoration in the North Delta. As a CALFED Stage 1 action, these improvements support other CALFED goals, which include water supply reliability, recreation, and agricultural land preservation. DWR is the State implementing agency, and many of the proposed CALFED elements for the project are similar to elements of earlier North Delta planning efforts. These earlier projects were suspended in deference to CALFED.

Project Area. The project area (Figure 2-2) is approximately 197 square miles in which DWR is considering alternatives for flood control and restoration actions. The following criteria were used to develop project area boundaries.

- The project area must include the footprint area of each alternative.
- The project area should be hydrologically contiguous.
- The project area should include portions of all waterways where existing flow patterns could be substantially affected by one or more of the alternatives.

- The project area should be compatible with flood control planning and implementation responsibilities of other flood control agencies.

Environmental Review. Proposed project actions and alternatives are subdivided into two basic groups for analysis in the EIR.

Group I consists of modifications to levees on McCormack-Williamson Tract, downstream levee raising to offset potential hydraulic impacts caused by these modifications, restoration of McCormack-Williamson Tract and the Grizzly Slough property, and dredging of the Mokelumne River.

Group II consists of proposed project actions on Staten Island and levee modifications and dredging along the Mokelumne River.

DWR staff worked with federal regulatory agency scientists and academic experts to complete development of three ecological conceptual model alternatives for the Group I actions. Details of the conceptual models are in Appendix D of the public draft EIR.

A preferred project alternative will be chosen through the EIR process and will be identified in the final EIR.

Project Status. Staff is preparing the final EIR and addressing the comments received during the 2008 comment period for the draft EIR. Through the CALFED Levee Stability Program, the U.S. Army Corps of Engineers (Corps) has expressed renewed interest in the flood control and ecosystem restoration actions proposed for McCormack-Williamson Tract (a component of the NDFCERP) and has committed federal funds to evaluate the project for Corps involvement. Staff also held additional meetings, including one with local, State, and federal regulatory agencies (November 3, 2009) to discuss the project's progress and to present the preferred alternative for the Group I actions. Participants at the meetings were receptive to implementation of the Group I actions

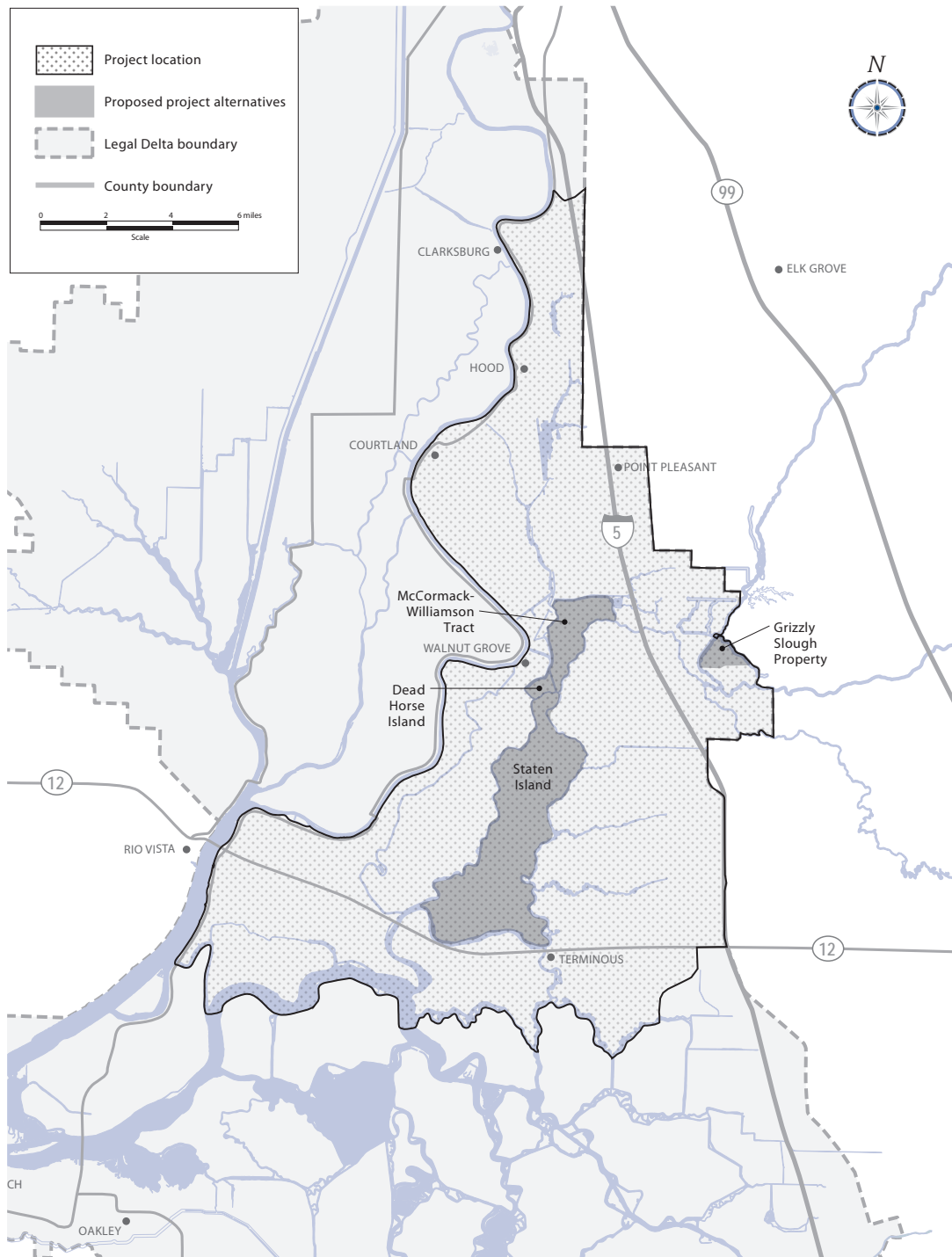


Figure 2-2 North Delta Flood Control and Ecosystem Restoration Project , Project Area

proposed with Alternative 1-A, and the partnership with The Nature Conservancy, DWR, and the Corps.

For more information, visit DWR's website.

West Delta Program

Objectives of the West Delta Program include the following:

- effectively manage SWP-owned lands on Sherman and Twitchell islands (approximately 12,500 acres total);
- improve the integrity of local levees;
- implement land-use management techniques to control subsidence and soil erosion on Sherman and Twitchell islands; and
- provide diverse habitat for wildlife, especially waterfowl.

DWR is a major landowner on Twitchell and Sherman islands and holds two of the three trustee positions for Reclamation Districts 1601 (Twitchell Island) and 341 (Sherman Island). Consequently, DWR participates in the management and operation of each district, with the goal of improving conditions and accountability. The reclamation districts provide levee maintenance, island drainage, and some internal water supply. These districts assess the landowners for the operational needs of the public districts.

South Delta Improvements Program

In 1999, the South Delta facilities became a key component of CALFED.

South Delta Improvements Program (SDIP) elements in the CALFED record of decision included increasing diversions through Clifton Court Forebay (first to 8,500 cfs and then to 10,300 cfs), dredging and installing operable tidal barriers in the South Delta, installing a fish barrier at Head of Old River, and constructing the first phase of

a new intake and fish screen in Clifton Court Forebay.

The SDIP consists of physical/structural and operational components. SDIP Stage 1, the physical/structural component, would consist of constructing and utilizing permanent operable gates and conveyance dredging. The SDIP Stage 2 operational component would consist of changes in export regulations.

DWR and Reclamation identified the following project objectives and purposes for SDIP:

- reduce movement of San Joaquin River watershed Central Valley fall-run and late fall-run juvenile Chinook salmon into the South Delta via Old River (SDIP Stage 1);
- maintain adequate water levels and water quality through improved circulation for agricultural diversions in the South Delta, downstream of Head of Old River (SDIP Stage 1);
- increase water deliveries and delivery reliability to SWP and CVP water contractors south of the Delta (SDIP Stage 2); and
- provide opportunities to convey water for fish and wildlife purposes by increasing the maximum permitted level of diversion through the existing intake gates at Clifton Court Forebay to 8,500 cfs (SDIP Stage 2).

The SDIP Stage 1 physical/structural component consists of the following elements:

- construct and operate a fish-control gate at Head of Old River to reduce downstream movement of San Joaquin River watershed Central Valley fall-run and late fall-run juvenile Chinook salmon into the South Delta via the Head of Old River;
- construct and operate up to three flow-control structures (gates) at Middle River

(near the confluence of Middle River with Victoria Canal), Grant Line Canal (near the confluence of Grant Line Canal and Old River), and Old River (just east of the Delta-Mendota Canal intake) to improve existing water level and circulation patterns in South Delta water channels;

- dredge various channels in the South Delta, including Middle and Old rivers, to improve conveyance, and dredge areas surrounding agricultural diversions to improve their function; and
- extend up to 24 agricultural diversion intake facilities to improve their function.

The SDIP final EIR/EIS (2006) determined the preferred alternative for SDIP Stage 1 to entail installation of permanent control gates to replace temporary structures currently installed and removed each year under the DWR Temporary Barriers Program. The preferred alternative also includes the elements of dredging and extending agricultural diversions.

Preferred Plan

The preferred plan for SDIP is to construct the physical/structural component as soon as permits are obtained and defer the operational component until more is known about the project's potential effects on the delta smelt and other protected fish species.

DWR deferred the increase in diversions of up to 10,300 cfs and the associated new fish screens as components of the SDIP due to major funding issues, as well as significant technical uncertainties associated with the design and construction of the new fish screens.

Program Status

DWR and Reclamation suspended most planning and permitting activities during 2009 while waiting for completion of the Endangered Species Act consultation for the Operations Criteria and Plan (OCAP).

USFWS issued a BO for the OCAP in December 2008. The USFWS concluded in the BO that the coordinated operations of the CVP and SWP would jeopardize the continued existence of delta smelt. The evaluation by the USFWS included analysis of the effects of the proposed SDIP and provided a reasonable and prudent alternative (RPA) for the SDIP under which the program could move forward.

NOAA Fisheries issued a BO for the OCAP in June 2009. NOAA Fisheries concluded in the BO that the coordinated operations of the CVP and SWP would jeopardize the continued existence of a number of threatened and endangered anadromous species, in particular Chinook salmon. The evaluation by NOAA Fisheries included analysis of the effects of the proposed SDIP, but no RPA for the SDIP was provided. DWR initiated discussion with NOAA Fisheries to establish required actions which could lead to an RPA.

Temporary Barrier Facilities

The South Delta Temporary Rock Barriers Project is an ongoing project which installs up to four rock barriers in channels located in the southern portion of the Sacramento-San Joaquin Delta near the cities of Tracy and Lathrop in San Joaquin County. The barriers are installed during irrigation season from April to November at four sites (see Figure 2-3), as follows:

- (1) Head of Old River, in Old River where it splits from the San Joaquin River;
- (2) Old River near Tracy, one-half mile east of the Jones Pumping Plant intake and about 8 miles northwest of Tracy;
- (3) Middle River near Victoria Canal, just south of the confluence of Middle River, Trapper Slough, and North Canal; and
- (4) Grant Line Canal, 420 feet east of the Tracy Boulevard Bridge.

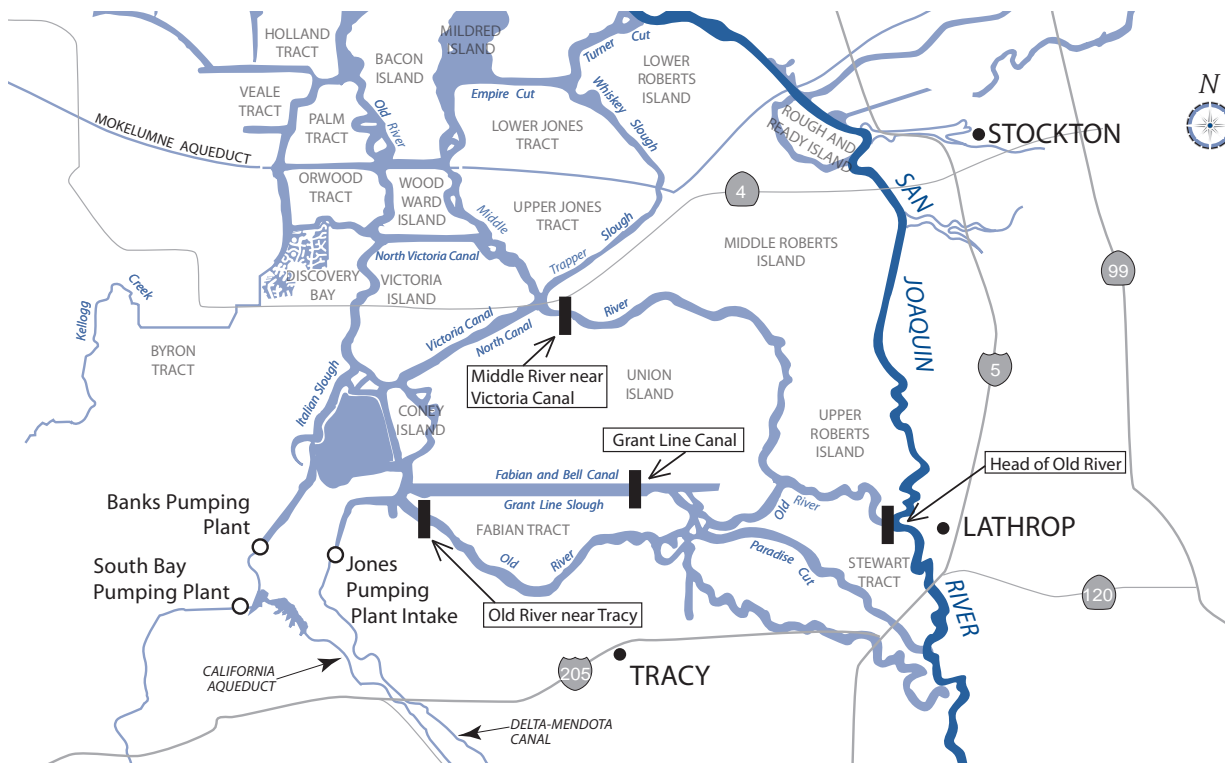


Figure 2-3 Temporary Barrier Locations in the South Delta

The Old River near Tracy, Middle River near Victoria Canal, and Grant Line Canal rock barriers are designed to act as flow control structures to improve water levels and circulation within the South Delta. The Head of Old River barrier is designed to improve migration conditions for Central Valley fall-run Chinook salmon in both spring and fall. In the spring, the barrier blocks juvenile salmon migratory movements into the Old River from the mainstream San Joaquin River. In the fall, the barrier increases the volume of San Joaquin River flow passing downstream through the Port of Stockton and improves dissolved oxygen levels in the San Joaquin River. As a result, it ameliorates the low dissolved oxygen sag that occurs near that area and aids adult salmon upstream migration in the San Joaquin River basin.

In 2009, the three agricultural barriers at Middle River near Victoria Canal, Grant

Line Canal, and Old River near Tracy were installed and operated as planned. However, due to a 2008 court order (Wanger Decision) to protect delta smelt, installation of the spring Head of Old River physical rock barrier was prohibited. In lieu of a rock barrier, DWR installed a nonphysical barrier comprised of sound projectors, strobe lights, and perforated pipe (to create an air bubble curtain). The nonphysical barrier was tested to determine its effectiveness to prevent the outmigrating juvenile salmon from entering the South Delta via Old River. To test the nonphysical barrier's effectiveness, a biotelemetry fish study was coordinated and implemented with the assistance from USFWS and Reclamation. Acoustic transmitters were inserted into outmigrating salmon smolts that were released in several groups at different times upstream of the nonphysical barrier. Receivers were installed at strategic locations to monitor fish survival and track their movement near the nonphysical barrier.

The fall Head of Old River barrier was not installed because existing flows and dissolved oxygen levels in the San Joaquin River were sufficient for Chinook salmon, and it was not requested by DFW. In response to a NOAA Fisheries requirement, a pilot-scale biotelemetry study was also conducted from March through July 2009 to develop an understanding of the movement and survival of salmonids through the South Delta with specific focus at the three agricultural barrier locations. Since 2009 was the first year of the fish monitoring program, data collected will be incorporated into the 2010 through 2012 studies to produce a comprehensive analysis.

In Chapter 3, Environmental Programs, Table 3-1 shows the schedule for installation and removal of the South Delta temporary barriers.

More information can be found on DWR's website.

Other South Delta Actions

Besides SDIP, actions in the South Delta include implementing flood and ecosystem improvements in the lower San Joaquin River and pursuing construction of potential interties between the SWP California Aqueduct and CVP Delta-Mendota Canal.

Delta Flood Control

Many important assets in the Sacramento-San Joaquin Delta are protected from flooding by levees. The levees serve many needs. They protect valuable wildlife habitat, farms, homes, urban areas, recreational developments, highways, railroads, natural gas infrastructure, utility lines, a major aqueduct, and other public developments. Some are critical to the protection of in-Delta water quality and water quality for approximately 25 million Californians who receive a portion of their water from the Delta. The State Legislature recognized the

importance of the Delta and enacted the Delta Flood Protection Act of 1988 (Senate Bill 34 [Water Code Sections 12300 et seq., and 12980 et seq.]). With Senate Bill 34, the Legislature declared that “. . . the Delta is endowed with many invaluable and unique resources and that these resources are of major statewide significance.”

Since 1988, the Delta Levees Program has made available approximately \$310 million in State-appropriated funds. These monies, combined with local funds, have realized approximately \$385 million in levee improvements (through State fiscal year 2008–2009).

In Senate Bill 34, the Legislature declared its intent to appropriate \$12 million annually for the Delta Flood Protection Fund. Six million dollars of the appropriation is for local assistance under the Delta Levee Maintenance Subventions Program. The remaining \$6 million is for the Delta Levees Special Flood Control Projects, including subsidence studies and monitoring on Bethel, Bradford, Jersey, Sherman, and Twitchell islands; Holland, Hotchkiss, and Webb tracts; and the towns of Thornton and Walnut Grove.

In 1996, Assembly Bill 360 was signed into law, expanding the area covered by the Delta Levees Program to include the remainder of the legal Delta and northern Suisun Bay from Van Sickle Island to westerly Montezuma Slough.

Bond appropriations of \$25 million from Proposition 204 (enacted in 1996) and \$30 million from Proposition 13 (enacted in 2000) provide supplemental funding.

In November 2002, Proposition 50 was approved. It provided \$70 million in additional funding to implement the Delta Flood Protection Program as adopted in CALFED, where the program is known as the Levee System Integrity Program (LSIP).

Proposition 84, approved by voters in November 2006, allocated \$275 million to the Delta over the next 4 years.

Proposition 1E, also approved by voters in November 2006, added funding for Delta levee improvements.

CALFED Levee System Integrity Program

The CALFED Bay-Delta Authorization Act (Public Law 108-361, 2004) authorized the Corps to develop action strategies to address urgent levee improvement needs and identify and prioritize potential short-term and long-term levee stability projects in the Delta.

The CALFED LSIP is the Corps' short-term strategy to move quickly on high-priority levee reconstruction projects.

The Corps' long-term strategy for Delta levees will be developed in the Sacramento-San Joaquin Delta Islands and Levees Feasibility Study. The feasibility study will build on recommendations in the State's Delta Risk Management Strategy, a technical study to assess the risks to the Delta levee system and the associated effects of levee failures.

CALFED LSIP goals and objectives are described below.

Base Level Protection

According to the CALFED record of decision, all Delta levees should be built to the Corps Delta-specific levee standard (Public Law 84-99). The minimum freeboard is 1.5 feet above the water level of a 100-year flood event for levees protecting agricultural land. A typical improved levee section would have a 16-foot crown width, a waterside slope of 2 horizontal to 1 vertical, and a landside slope designed for the depth of peat soils under the levee. Generally, the landside slope would be between 3:1 and 5:1.

The CALFED LSIP provides funding to help local levee-maintaining agencies improve all Delta levees to the Public Law 84-99 standard. About 500 out of 1,100 miles of Delta levees, including approximately 400 miles of project levees, are at or above the standard. During CALFED Stage 1 (implemented 2000–2007), about 200 additional miles of levees were planned to be altered to meet the Public Law 84-99 level of protection, provided there was sufficient funding. Additional Proposition 84 funds became available to the Delta Levee Maintenance Subventions Program in fiscal year 2008–2009. Section 3015 of the Water Resources Development Act of 2007 authorized an additional \$106 million for levee stability projects in the Delta.

Levee Upgrades

Upgrading the Delta levees is an integral part of the CALFED LSIP plan being implemented through the DWR Delta Flood Protection Program.

DWR and the Corps signed an agreement in 2001 to co-manage the CALFED LSIP, including the Delta Flood Protection Program. This agreement allows close coordination of efforts and assures compatibility with CALFED goals and objectives.

Levee improvements beyond the Public Law 84-99 standard, where appropriate, will follow or complement the completion of base-level protection depending on continuation of the program and funding availability. Results from Delta planning studies will enable DWR to prioritize future work.

Special Improvement Projects

Another LSIP goal is to enhance the stability of levees in the Delta. LSIP would provide funding to the levee-maintaining agencies for making improvements such as raising levee crests to Hazard Mitigation Plan

and Public Law 84-99 sustainable levee cross-section standards. This work will be completed on levees that have particular importance in the State. Priorities include protecting life and property; water quality (preventing salinity intrusion); the Delta ecosystem; and agricultural production.

Suisun Marsh Flood Protection and Ecosystem Enhancement

LSIP support of maintenance and improvement of the levee system in the Suisun Marsh provides for levee integrity, ecosystem restoration, and water quality benefits. The Suisun Marsh Levee Investigation was undertaken in January 1999, at the request of the CALFED Policy Group, to determine whether adding Suisun Marsh levees into the LSIP would contribute to CALFED program goals. The team identified significant links between Suisun Marsh levee maintenance and achievement of CALFED drinking water quality and ecosystem restoration goals. Furthermore, modeling research indicates a significant risk of negative water quality impacts in the Delta if Suisun Marsh levees are inadequately maintained and allowed to fail.

CALFED LSIP actions for the Suisun Marsh will be developed during preparation of the Suisun Marsh Plan. Full implementation of the Suisun Marsh portion of LSIP awaits completion of the Suisun Marsh Charter, independent funding, and authority in the Water Code, or other law, for the program authorization.

For more information about the Suisun Marsh Plan and Charter, see Chapter 4, Water Quality.

Delta Flood Emergency Preparedness and Response Plan

DWR continued developing a Delta Flood Emergency Preparedness and Response Plan to improve its ability to prepare for, respond

to, and recover from multiple-island levee failure within the Sacramento-San Joaquin Delta caused by a flood or seismic event. The plan's objective is to minimize recovery time from such an event through preparedness, response, and actions taken.

For more information, visit DWR's website.

Delta Levee Maintenance Subventions Program

The Delta Levee Maintenance Subventions Program provides funding, as a reimbursement of up to 75 percent of eligible costs, to local Delta reclamation districts for levee maintenance and improvement. The program helps protect the Delta ecosystem, Delta communities and agriculture, State and private infrastructure, and the State's water supply.

Each year, up to 70 participating local agencies prepare work plans and file funding applications with the Central Valley Flood Protection Board (CVFPB). DWR reviews funding applications and work plans, makes recommendations, and requests CVFPB approval for the program funding levels. CVFPB approves each local reclamation district's maximum possible reimbursement and maximum advanced reimbursement. CVFPB and the local agency enter into an agreement for the reimbursement of the costs of the work. The work is to be performed in accordance with the approved application, provisions and policies in the Water Code, and DWR guidelines, procedures, criteria, and recommendations. The local agency is responsible for ensuring projects are in compliance with the California Environmental Quality Act and all applicable environmental laws and regulations. The projects must also receive confirmation from DFW that a net long-term habitat improvement of riparian, fisheries, and wildlife habitat will result.

Delta Levees Habitat Improvement

As part of the CALFED LSIP, the DWR FloodSAFE Environmental Stewardship and Statewide Resources Office continued to work to create valuable habitat in the Delta. By the end of 2009, the program had developed 283.7 acres of various types of habitat, 9,410 linear feet of shaded riverine aquatic habitat for mitigation, and 24.4 acres and 14,328 linear feet of shaded riverine aquatic habitat for enhancement.

Completed mitigation and enhancement projects include:

- Medford, Bethel, and Kimball islands;
- Terminous, Wright-Elmwood, Palm, and Thornton-New Hope (Grizzly Slough) tracts;
- Sherman Island setback levee;
- Twitchell Island setback levee;
- Twitchell Island mitigation areas;
- Staten Island berm and channel islands;
- Canal Ranch attached berm;
- lower Sacramento River revegetation, Grand Island, in participation with the Corps;
- Decker Island Phase I and Phase II construction and tidal wetlands restoration at Horseshoe Bend along the lower Sacramento River;
- Tyler Island bank stabilization demonstration; and
- Delta In-Channel Demonstration Project.

The Delta In-Channel Demonstration Project was undertaken with support from CALFED to determine the feasibility of “environmentally friendly” structures for controlling erosion and protecting Delta habitat associated with in-channel islands. The three in-channel island test sites were Webb Tract Sites I and III and Little Tinsley Island. The project demonstrated the feasibility of protection and restoration of

Delta priority landforms and populations of special-status species using environmentally friendly biotechnical treatments.

Other projects underway include the following:

- long-term management of Meins Landing for conversion to tidal marsh and enhancement of salt marsh harvest mouse habitat;
- bird monitoring at the Decker Island restoration site;
- Sherman Island Parcel 11 Revegetation Project;
- Dutch Slough tidal marsh restoration on nearly 1,200 acres; and
- Bradford Island Tract 19 mitigation area monitoring and maintenance.

Proposed projects include Delta levees habitat mitigation, flooded islands, McCormack-Williamson Tract, Elk Slough, and Veale Tract.

DWR, DFW, and reclamation districts are successfully providing avoidance or mitigation of habitat losses and net long-term habitat improvement in the Delta. Reclamation districts have cooperated in helping DWR meet its mitigation and enhancement needs. Decker Island Habitat Restoration Area, completed in 2007, is targeted specifically for the needs of endangered Sacramento splittail and delta smelt, providing 26 acres of tidal aquatic area. Continued monitoring is determining the amount of fishery and avian use of the restoration site, evaluating the hydrogeomorphic performance of the site, and providing valuable data for future restoration work.

DWR and DFW will continue to work with the reclamation districts to preserve existing habitat and improve the quantity and quality of newly developed habitat in the Delta.

Delta Special Flood Control Projects Program

The Delta Special Flood Control Projects Program under CALFED assists the eight western islands, portions of the Suisun Marsh, the towns of Thornton and Walnut Grove, and other locations in the Delta with flood protection and levee stability repairs. The California Water Commission approved a report of initial actions in September 1989, and it approved the long-term actions and priorities in May 1990. The long-term actions and priorities serve as a guide for DWR to determine the best use of appropriations to protect these islands. Long-term actions and priorities include the following:

- rehabilitation of threatened levees through the beneficial reuse of dredged material;
- verification of elevations in the Delta through the use of global positioning system equipment and light detection and ranging;
- upgrading levees to the standards included in Bulletin 192-82 (Delta Levees Investigation); and
- considering projects to achieve net long-term habitat improvement for fish and wildlife.

While DWR seeks cost sharing for all projects, the actual reimbursement depends on each reclamation district's ability to pay. DWR provides up to 100 percent of the cost. Districts receiving these funds are required to participate in a habitat improvement program to ensure net long-term habitat enhancement.

Levee restoration projects, habitat projects, and other special projects were conducted on various Delta islands and tracts in 2009.

Reuse of Dredged Material for Delta Levees

As local sources of fill material for levee repair are depleted, new economical sources must be located. DWR has worked to find more opportunities to reuse clean, dredged materials in the Sacramento-San Joaquin Delta.

As part of this effort, a charter for the multiagency Delta Long-Term Management Strategy (LTMS) for the beneficial reuse of dredged material became effective in February 2007. The LTMS is designed to improve operational efficiency and coordination of collective and individual agency decision-making responsibilities, resulting in approved dredging and dredged material management actions in the Delta. Regular LTMS meetings include representatives from DWR, the Corps, the U.S. Environmental Protection Agency, the Regional Water Quality Control Board (RWQCB), the Ports of Stockton and West Sacramento, and other interested parties. LTMS is evaluating potential beneficial reuse opportunities, particularly from the proposed Sacramento and Stockton Deep Water Ship Channel projects, and has prepared a draft summary of Delta dredged material placement sites and a draft Delta-wide map of existing sediment placement sites.

To facilitate the permitting process for dredging and dredged material placement and reuse, a draft joint permit application for dredging and dredged material placement/reuse has been developed, an interagency agreement between DWR and the RWQCB is underway, a sediment background study is being planned on Sherman, Twitchell, and Brannan-Andrus islands, and development of general order waste discharge requirements to help streamline the RWQCB's approval process has been initiated.

LTMS long-term goals include the following:

- developing a streamlined permitting process for dredging and dredged material reuse;
- developing a consolidated guidance document addressing sampling, tests, protocols, and methods for assessing sediment and dredged material characterization;
- developing a sediment management plan designed to help anyone who wants a better understanding of methodologies for assessing and characterizing sediments and determining appropriate disposal options;
- developing a programmatic biological assessment for sensitive Delta species;
- drafting a programmatic EIR/EIS for the Delta LTMS; and
- identifying and permitting additional sediment placement and beneficial reuse sites in the Delta.

For more information, visit DWR's website.

Subsidence Investigations

Over time, draining and cultivating Sacramento-San Joaquin Delta marshlands have caused the peat soil to break down and compact. The peat soil has oxidized and subsided since the mid-1800s when the land was first drained and levees constructed. The surface of organic soils in the Delta is now between 10 and 29 feet below sea level. The Legislature recognized the problem and, with the initiation of the Delta Flood Protection Act of 1988, DWR began monitoring subsidence and studying its causes and the means for reversing its effects.

DWR and the U.S. Geological Survey continued research on the 15-acre Twitchell Wetlands Research Facility, initially funded in 1999 using CALFED Category III funds. To date, field monitoring, determination of hydrologic and tidal boundary conditions, and sediment modeling have been

completed; construction, monitoring, and instrumentation installation continues at the field test sites. Water quality, soils, and hydraulic and carbon release data were collected from the test sites, and the preliminary model for groundwater has been completed. Additional research activities performed in 2009 by the U.S. Geological Survey include assessments of water quality impacts, greenhouse gas release, and other impacts of tule cultivation in subsided Delta islands.

Also in 2009, further development of a Farm Scale Wetlands Demonstration Project was proposed adjacent to the existing Subsidence Reversal Demonstration Project, intended to determine the land accretion and carbon sequestration rates associated with wetland farming within the western Delta. Research from the 15-acre Twitchell Wetlands Research Facility has shown that wetland restoration can accrete a net average of 2 inches of land surface per year and potentially sequester 25 tons of carbon per acre per year. Implementation of the wetlands demonstration project includes construction of a farm-scale wetland, between 300 and 1,000 acres, within the western Delta.

In 2009, planning and environmental permitting for the Mayberry Farms Subsidence Reversal and Carbon Sequestration Project was well underway. When completed, the project will create permanently flooded wetlands on a 307-acre parcel on Sherman Island owned by DWR. The project plans to restore approximately 192 acres of emergent wetlands and enhance approximately 115 acres of seasonally flooded wetlands. The project is a demonstration project that will provide subsidence reversal benefits and develop knowledge that can be used by operators of private wetlands, including "duck clubs," which manage lands for waterfowl-based recreation. By maintaining permanent water, the growth and subsequent decomposition of

emergent vegetation is expected to control and reverse subsidence. The project is also anticipated to provide climate benefits by sequestering atmospheric carbon dioxide. The parcel is expected to provide year-round wetland habitat for waterfowl and other wildlife.

In addition to tules, rice is a wetland crop with an existing agricultural market that has the potential to accrete land mass and sequester carbon. The Subsidence Mitigation Through Rice Cultivation Research project will determine whether growing rice reverses subsidence without deleterious effects to the environment, and whether it is economically feasible in the Delta.

In April 2009, 160 acres of rice were planted on Twitchell Island after initial construction of the study area in 2008. Rice was harvested in October 2009. Initial research data analyzed by consultants, University of California, Davis, and the U.S. Geological Survey, showed that rice production stopped subsidence, achieved small amounts of accretion, sequestered atmospheric carbon dioxide, and acted as a sink for methyl mercury. Planting is scheduled again for spring 2010, with approximately 304 acres of rice production planned.

DWR continued to work with the CALFED Science Program to develop best management practices to control and reverse subsidence and will work with local districts and landowners to implement cost-effective measures.

For information related to these projects, please visit DWR's website.

Delta Agricultural Water Agencies

In 1974, the Delta Water Agency was replaced by six Delta agricultural water agencies: North Delta Water Agency, South

Delta Water Agency, Central Delta Water Agency, Contra Costa County Water Agency, East Contra Costa Irrigation District, and Byron-Bethany Irrigation District. In 1981, North Delta Water Agency and East Contra Costa Irrigation District signed water rights management contracts with DWR. DWR negotiated contracts and requested negotiations with other agencies to provide water level, circulation, and quality needs in certain areas.

South Delta Water Agency Contract

In September 1990, DWR completed negotiations for a long-term agreement with South Delta Water Agency and Reclamation. Under the South Delta contract, the parties agreed to proceed with the design, construction, and operation of certain barrier facilities in the South Delta channels. These facilities resolved portions of the lawsuit that South Delta Water Agency filed in 1982 regarding the alleged effects of export pumping by SWP and CVP on water levels, quality, and circulation in the South Delta.

DWR has installed and operated temporary barrier facilities in the South Delta to improve area conditions, as well as collect data needed to design and operate permanent barrier facilities. Ongoing efforts are being made to improve water levels, circulation, and quality in South Delta channels. These efforts include modifying and dredging around local diverters' intakes, conducting a series of computer modeling studies, and modifying barrier flap gate operations. Other alternatives being considered include changing barrier heights at Middle River by 1 foot, dredging portions on upper Middle River, and installing portable pumps at Paradise Cut. Data collected in the Temporary Barriers Program were used to assess the barriers' ability to reduce or eliminate adverse water levels and improve local hydraulic circulation patterns.

Western Delta Municipal Water Users

DWR signed contracts with Contra Costa Water District in 1967 and the City of Antioch in 1968. These contracts compensate Contra Costa and Antioch for purchasing water of usable quality when such water is not available from Mallard Slough and the San Joaquin River.

According to the contract, DWR compensates each agency for the additional costs of purchasing a substitute water supply from the Contra Costa Canal. This water is purchased to replace water supplies of usable quality which are lost due to SWP operations. Credits for the number of days of above-average water supplies of usable quality, from Mallard Slough and the San Joaquin River, accrue to offset the number of below-average days in future years.




Photo: Mike Bradbury

Chapter 3

Environmental Programs

Swainson's hawk, Buteo swainsoni.

Significant Events in 2009



On March, 4 2009, the California Fish and Game Commission voted to list longfin smelt as threatened and upgrade the status of delta smelt from threatened to endangered under the California Endangered Species Act.

On June 4, 2009, the National Marine Fisheries Service issued a new biological opinion for salmonids and green sturgeon on the long-term operations of the Central Valley Project and State Water Project (SWP).

The Department of Water Resources published *Using Future Climate Projections to Support Water Resources Decision Making in California*. This report documents much of the development and analysis work on climate change impacts on SWP operations that has been done over the last several years.

Information in this chapter was contributed by the Division of Environmental Services, the Division of Operations and Maintenance, the Division of Integrated Regional Water Management, and the State Water Project Analysis Office.

The Department of Water Resources (DWR) has developed and implemented several programs to avoid, minimize, or offset adverse environmental impacts resulting from construction and operation of State Water Project (SWP) facilities.

Operations for Species of Concern

A primary consideration in the operation of the SWP is avoiding, minimizing, and offsetting adverse impacts to species of concern, species listed as threatened or endangered by a State or federal agency, or species proposed for listing. The SWP is operated pursuant to biological opinions (BO) issued under the federal Endangered Species Act (ESA), as well as consistency determinations or incidental take permits issued under the California Endangered Species Act (CESA). A key to avoiding and minimizing adverse impacts to these species is maintaining flexibility in SWP operations. Operational responses can include Delta Cross Channel gate closure, export curtailments, changes in delivery schedules, increased reservoir releases, preferential use of certain facilities, or a combination of these actions. Additional information can be found in Chapter 7, Water Supply Development and Reliability.

San Joaquin River Activities

Vernalis Adaptive Management Plan

The *Vernalis Adaptive Management Plan* (VAMP), was initiated in 2000 as part of State Water Resources Control Board, Water Right Decision 1641. VAMP is a large-scale, long-term (12-year), experimental-management program designed to protect juvenile Chinook salmon migrating from the San Joaquin River through the Sacramento-San Joaquin Delta. The goal of VAMP is to conduct operational changes and associated fisheries studies to determine if a relationship exists between river flow, Delta exports, and salmon survival throughout the southern

Delta. VAMP's study results will be used to determine if changing San Joaquin River flows and Delta exports in the spring can significantly benefit San Joaquin River fall-run Chinook salmon.

DWR and the Bureau of Reclamation (Reclamation) coordinate SWP and Central Valley Project (CVP) operations to increase flows in the San Joaquin River during the specified VAMP pulse flow period, from April 15 through May 15, to benefit fall-run Chinook salmon emigrating from the San Joaquin River Basin. Intensive fisheries sampling is conducted in the lower San Joaquin River during the pulse flow period. VAMP studies coordinate variable export pumping rates with a fish release and tracking study to estimate the relative survival of marked salmon moving through the Delta under VAMP during the pulse flow period. A temporary rock barrier is installed at the Head of Old River to block the movement of juvenile salmon into Old River, allowing them to continue down the main stem of the San Joaquin River.

In 2009, VAMP marked its tenth year of operating in compliance with Water Right Decision 1641. The 2009 VAMP target flow period was April 19 through May 19. The dry classification for water year 2008–2009, along with the critical water year type classification for both of the previous two water years, 2006–2007 and 2007–2008, triggered the “Sequential Dry-Year Relaxation” condition, meaning that no VAMP target flow would be defined and no supplemental water for river flows was provided. The implementation phase of the VAMP hydrologic operation consisted mainly of monitoring flow conditions during the

VAMP period and making modifications to the daily operation plan.

Although there was no VAMP target flow and no supplemental water for river flows, the fish release and tracking study was conducted as planned, and San Joaquin River tributary flows were coordinated to minimize the variation in flow in the San Joaquin River near Vernalis.

The mean daily flow in the San Joaquin River at the Vernalis gauge averaged 2,280 cubic feet per second (cfs) during the VAMP target flow period. The mean daily flow at Vernalis varied between 1,830 cfs and 2,650 cfs during the target flow period.

With the Sequential Dry-Year Relaxation condition in affect, SWP and CVP combined exports from April 17 through May 17 averaged 1,990 cfs and ranged from 1,350 to 2,590 cfs.

Temporary Barriers

VAMP-participating agencies install temporary barriers in the San Joaquin River to provide an adequate water supply for South Delta water diverters, improve water quality in the Stockton Deep Water Channel, and prevent entrainment of juvenile Chinook salmon at the South Delta facilities.

Brief background information about the temporary barriers can be found in Chapter 2, Delta Resources.

Table 3-1 provides an overview of the time frames for installation and removal of the temporary barriers.

Head of Old River. The spring Head of Old River rock barrier was not installed in 2009. Instead, a nonphysical barrier or “bubble barrier” was installed. Installation was completed and tested in time for the first of seven VAMP experimental fish releases that began April 22, 2009. The experimental barrier, placed near the channel bottom and extending across the entrance to Old River, uses a combination of bubbles, lights, and sound to guide out-migrating Chinook salmon smolts away from Old River to continue their migration down the San Joaquin River. To study the effectiveness of the nonphysical barrier, underwater receivers were installed to detect tagged smolts. The nonphysical barrier was completely removed by June 4, 2009.

The fall Head of Old River barrier was not installed in 2009.

Agricultural Barriers—Old River near Tracy, Middle River, Grant Line Canal. The U.S. Fish and Wildlife Service (USFWS) BO issued in May 2008 was for the installation and removal of the temporary barriers in 2008, 2009, and 2010. Installation of the Middle River barrier was completed June 19, 2009 with the culvert flap gates tied open. The Old River near Tracy (ORT) barrier was completed June 23 with flap gates tied open for water quality purposes.

Table 3-1 Schedule for Installation and Removal of South Delta Temporary Barriers, 2009

| Barrier | Installation | | | Removal | | |
|------------------------|---------------|---------------|-----------------------|-------------|-------------|-------------|
| | Started | Closure | Completed | Started | Breached | Completed |
| Nonphysical barrier | April 7 | N/A | April 20 ^a | May 26 | N/A | June 4 |
| Old River near Tracy | May 18 | June 23 | July 3 | November 2 | November 4 | November 19 |
| Middle River | May 19 | June 19 | July 14 | November 16 | November 17 | November 19 |
| Grant Line Canal | May 29 | July 1 | July 3 | October 28 | October 30 | November 13 |
| Fall Head of Old River | Not Installed | Not Installed | Not Installed | N/A | N/A | N/A |

^a Operation started on April 22, 2009.

Work on the Grant Line Canal barrier boat ramp was completed June 24, with the barrier flap gates tied open and the weir center portion open. The Grant Line Canal barrier weir center was filled beginning June 30 and was completed July 1.

As of July 27, 2009, all of the agricultural barriers were operating tidally.

The ORT barrier had three culvert flap gates tied open beginning August 3 in advance of the next spring tide. This was done to help improve water circulation without reducing water levels. These three flap gates were untied and back to tidal operation on August 10, tied open on August 17, and untied and back to tidal operation on August 24, in advance of the upcoming neap tide.

As of September 1, the ORT barrier had six culvert flap gates operating tidally and three tied open. All nine culverts on the ORT barrier were operating tidally since September 8.

Starting September 15, three culvert flap gates at the ORT barrier were tied open. On September 22, they were untied, and all nine culverts were again operating tidally.

The removal of the South Delta temporary rock barriers began in early November and was completed by November 19.

San Joaquin River Restoration Program

In 2006, the San Joaquin River Restoration Program (SJRRP) was established to implement the court settlement to restore 153 miles of the San Joaquin River from Friant Dam to the confluence of the Merced River. The agencies responsible for the implementation of SJRRP include Reclamation, USFWS, the National Marine Fisheries Service (NOAA Fisheries), DWR, and the Department of Fish and Wildlife (DFW; formerly Department of Fish and

Game). During 2007, many organization and management actions were initiated to provide a structure for SJRRP. A Program Management Plan was completed in May 2007 to provide a framework and strategy that the implementing agencies will use to collaborate and adaptively implement SJRRP. Four technical work groups were formed to support SJRRP: Water Management, Engineering and Design, Environmental Compliance and Permitting, and Fisheries Management.

On March 30, 2009, the San Joaquin River Restoration Settlement Act was signed into law, authorizing and funding the SJRRP.

In 2009, progress continued toward the preparation of the draft programmatic environmental impact statement (EIS)/ environmental impact report (EIR) for SJRRP. SJRRP anticipated that the draft programmatic EIS/EIR would be available for public review in January 2010. The final environmental assessment/initial study for the interim flows was released on September 25, 2009. The Draft Fisheries Management Plan was released in June. In September public scoping meetings were held in support of planning, environmental compliance, and design activities for two of the high priority, Phase 1 channel improvements identified in the Settlement: (1) Reach 4B, Eastside Bypass, and Mariposa Bypass Low Flow Channel and Structural Improvements Project and (2) Mendota Pool Bypass and Reach 2B Channel Improvements Project.

A major accomplishment was the release of interim flows down the river beginning October 1 and ending November 20; during this time flows were monitored and studied for future design and modeling.

More information is available on SJRRP's website.

Environmental Water Account

The Environmental Water Account (EWA) was established in the CALFED Bay-Delta Program programmatic EIS/EIR record of decision. A cooperatively managed program, the EWA provides protection to the fish of the Bay-Delta Estuary through environmentally beneficial changes and increased flexibility in SWP and CVP coordinated operations while maintaining water supply reliability for SWP and CVP users.

Under the EWA, development of various water asset options, such as water banking, borrowing, transfers, and conveyance arrangements, allows stream flow and Delta outflow augmentation for fishery protection, restoration, and recovery. The EWA's water assets include SWP and CVP water export modifications during critical stages of fish life cycles and water supply replacement due to pumping reductions in the Delta.

Responsibility for implementing the EWA resides with the following five State and federal agencies (EWA agencies): NOAA Fisheries, USFWS, and DFW (management agencies), and with Reclamation and DWR (project agencies).

The EWA Operating Principles Agreement was originally executed between the five State and federal agencies in 2000. In 2004, the agreement was extended through December 31, 2007. No further extensions of the EWA occurred beyond 2007, however federal authorization continues through 2014.

In 2008, the five EWA agencies released the Final Supplemental EIS/EIR evaluating the effects associated with extending the EWA operations through 2011. However, in late 2008, DWR and Reclamation, lead agencies for the EIS/EIR, suspended work on the longer term EWA program.

DWR has not purchased any water for the EWA since executing the Lower Yuba River

Accord Water Purchase Agreement in 2007. However, for fishery purposes, prepaid annual water deliveries to DWR totaling 60,000 acre-feet will continue through 2015, consistent with past EWA operations.

For more details on EWA deliveries, see Chapter 9, Water Contracts and Deliveries.

Lower Yuba River Accord

The Lower Yuba River Accord's (Yuba Accord) purpose is to resolve instream flow issues and protect and enhance lower Yuba River fisheries and local water supply reliability. The Yuba Accord provides revenues for local flood control and water supply projects, water to enhance SWP and CVP water supply reliability by offsetting Delta export reductions for protection and restoration of Delta fisheries, and improvements in statewide water supply management, including dry year supplies for participating SWP and CVP contractors.

Water contracted by DWR under the Yuba Accord continues to be used to help offset Delta export reductions to benefit fish, consistent with past EWA operations as discussed above.

Yuba Accord information can be found in Chapter 7, Water Supply Development and Reliability, and Chapter 9, Water Contracts and Deliveries.

Oroville Facilities Relicensing

DWR continued to seek a new 50-year license for the Oroville Facilities from the Federal Energy Regulatory Commission (FERC) to generate hydroelectric power while meeting existing commitments and complying with laws and regulations regarding water supply, flood control, the environment, and recreational opportunities.

Implementation of most of the actions outlined in the *Settlement Agreement for Licensing of the Oroville Facilities*, FERC

Project No. 2100 cannot take place prior to the issuance of the new license; however, a short list of projects was initiated when the settlement agreement was signed by DWR. This includes:

- continued funding of the Feather River Fish Hatchery (FRFH);
- planning and permitting for Feather River spawning gravel supplementation;
- funding for development of an Oroville Wildlife Area management plan;
- funding for the operations of the Oroville Wildlife Area;
- a screening-level analysis for Feather River riparian/floodplain habitat enhancement; and
- engineering studies to determine the best approach for providing cooler Feather River water temperatures below Oroville Dam.

Various conservation measures for the species identified in the USFWS 2007 BO for the Oroville Facilities relicensing project are currently being implemented on SWP lands. Monitoring associated with these measures includes an annual vernal pool survey (645 mapped vernal pools and/or features), protective measures for elderberry shrubs (host plant for the valley elderberry longhorn beetle), and annual monitoring of nesting bald eagles (four active nests) within the SWP area. In addition, habitat management activities within the Oroville Wildlife Area are coordinated through DFW staff. These activities include providing nest and forage habitat for waterfowl and upland bird species, monitoring and maintaining Thermalito Afterbay brood pond water surface elevations, and protecting and conserving giant garter snake habitat. An annual compliance report for 2009 was compiled by DWR and submitted to USFWS.

In July 2009, NOAA Fisheries released their draft BO for the Oroville Facilities relicensing for the ESA-listed species under their jurisdiction: southern resident

killer whale, California Central Coast steelhead, Sacramento River winter-run Chinook salmon, Central Valley spring-run Chinook salmon, Central Valley steelhead, and the southern DPS of North American green sturgeon. Comments and additional information pertaining to the BO were received throughout 2009.

For more information, see Chapter 10, Power Resources, or visit the Oroville Relicensing webpage on DWR's website.

Ongoing Environmental Activities Related to the Oroville Facilities FERC License

Invasive Plant Management

In 2009, DWR worked with DFW, the Department of Parks and Recreation, and the California Conservation Corps on invasive plant control and removal. Red sesbania (*Sesbania punicea*) was treated in areas around the Thermalito Power Canal, Thermalito Forebay, and Oroville Wildlife Area near the fish weir road. California Conservation Corps treated *Arundo donax* (giant reed) in several locations within the Oroville Wildlife Area, along the Feather River, and around Thermalito Afterbay.

Lake Oroville and the upper Feather River lakes (Lake Davis, Frenchman Reservoir, and Antelope Lake) continued as SWP sampling locations in the zebra and quagga mussel monitoring program. (For more information, see the Quagga and Zebra Mussel Monitoring section in this chapter.)

Lake Oroville Fishery Management

Since 1993, FERC has required DWR to improve fish habitat in Lake Oroville as part of DWR's revised recreation plan.

In 2009, DWR provided funding to stock Lake Oroville with 256,542 coho salmon yearlings (approximately 8 inches long). The fish were reared at FRFH, and all were tagged (coded wire tags) for monitoring purposes.

In the fluctuation zone of Lake Oroville, DWR constructed fish habitat structures and planted several thousand willow tree cuttings.

In 2009, Lake Oroville reservoir elevation reached its annual low point, 659.2 feet, on January 9 and its annual high point, 808.44 feet, on May 25.

Feather River Fish Hatchery, 2008–2009 Brood Year

FRFH is an SWP facility that has been in operation since the 1960s. It is operated by DFW and funded by DWR, and DWR performs all major maintenance activities.

FRFH fish releases in 2009 were as follows:

- FRFH juvenile fall-run Chinook salmon released in the Delta, Sacramento River, and San Francisco and San Pablo bays: 9,724,505;
- juvenile steelhead released in the Feather River: 273,698 (273,098 at Boyd's Pump [Sutter County] and 600 at Bedrock Park [Butte County] as part of the Delta Pumping Plant Fish Protection Agreement); and
- juvenile spring-run Chinook salmon: 2,122,131 (1,037,222 released in the Feather River and 1,084,909 released in San Pablo Bay). All fish were coded wire tagged and adipose fin marked.

During the 2009 fall spawning period, 879 adult spring-run Chinook salmon returned to the hatchery, as well as 5,784 fall-run Chinook salmon. Slightly more than 11 million Chinook salmon eggs were collected. Additional numbers of salmon returned to the hatchery, but were not used for egg collection as the hatchery quotas had already been reached. The number of steelhead that returned to the hatchery was 86, and 76,919 steelhead eggs were collected.

Invasive Species

Quagga and Zebra Mussel Monitoring

The quagga mussel, *Dreissena rostriformis bugensis*, and the zebra mussel, *D. polymorpha*, are invasive freshwater mussels that pose a significant threat to the SWP. Both species attach to hard substrates, including other mussels, with strong byssal threads, forming dense colonies and causing significant biofouling impacts to raw water infrastructure by clogging small diameter piping and filters and encrusting trash racks and fish screens.

In early 2007, the quagga mussel was detected in the lower Colorado River and spread throughout connected water diversion systems (see Bulletin 132-08). The following year, the zebra mussel was detected in San Justo Reservoir in San Benito County, adding to the existing threat. In response, DWR formed the Aquatic Nuisance Species (ANS) Program within the Division of Operations and Maintenance (O&M). The program includes early detection monitoring, vector management, rapid response planning, long-term mussel management, and public outreach.

DWR routinely monitors the California Aqueduct, SWP reservoirs, and the Sacramento-San Joaquin Delta for the presence of quagga and zebra mussels. DWR uses three different methods to monitor for mussels: zooplankton tows (with DNA analysis) for veligers (the free-floating larval stage; Table 3-2); settlement plates (Table 3-3); and bioboxes for adults (attached/settled stage).

In 2009, DWR and two collaborating water agencies, Santa Clara Valley Water District (Santa Clara) and The Metropolitan Water District of Southern California (Metropolitan), collected 301 veliger samples at 16 locations (see Table 3-2). In addition, DWR staff

Table 3-2 Veliger Monitoring Locations and Frequency, 2009

| Location | Description | Target Frequency | Collector | Samples Collected |
|-----------------------------------|--------------------------------------|----------------------|--------------|-------------------|
| Lake Oroville | Near dam | twice monthly | DWR | 15 |
| Sacramento-San Joaquin Delta | Old River at Rock Slough | monthly | DWR | 12 |
| Sacramento-San Joaquin Delta | San Joaquin River at Prisoners Point | monthly | DWR | 12 |
| Sacramento-San Joaquin Delta | Sacramento River at Rio Vista | monthly | DWR | 12 |
| Barker Slough/Cache Slough | Water quality station | twice monthly | DWR | 11 |
| Banks Pumping Plant Headworks | Water quality station | weekly | DWR | 32 |
| Lake del Valle | Water quality station | monthly | DWR | 10 |
| O'Neill Forebay Outlet (Check 13) | Water quality station | twice monthly | DWR | 20 |
| San Luis Reservoir | Pacheco Pumping Plant Portal | monthly ^a | Santa Clara | 7 |
| Check 41 | Water quality station | weekly | Metropolitan | 52 ^b |
| Pyramid Lake | Outlet tower | twice monthly | DWR | 20 |
| Castaic Lake | Outlet tower | twice monthly | DWR | 20 |
| Check 66 | Upstream of bridge | twice monthly | DWR | 20 |
| Silverwood Lake | Outlet tower | twice monthly | DWR | 19 |
| Devil Canyon Pumping Plant | Afterbay Water quality station | twice monthly | DWR | 20 |
| Lake Perris | Outlet tower | twice monthly | DWR | 19 |

^a Spring through fall.^b Target number of samples; actual number collected not available.**Table 3-3 Adult Mussel Monitoring Locations**

| Location | Description |
|---|-------------------------------|
| Lake Oroville | Lime Saddle Marina |
| Lake Oroville | Bidwell Canyon |
| Lake Oroville | South orange buoy |
| Lake Oroville | North orange buoy |
| Skinner Fish Facility | Downstream of Skinner louvers |
| Bethany Reservoir | Near launch ramp |
| San Luis Reservoir | Boat ramp |
| O'Neill Forebay | O'Neill launch ramp |
| Coastal Aqueduct | Trash racks (Milepost 02) |
| California Aqueduct—Check 29 | Near Check 29 |
| California Aqueduct—Edmonston Pumping Plant | Edmonston Pumping Plant |
| West Branch—Pyramid Lake | Near radial gate at dam |
| West Branch—Castaic Lake | High outlet tower |
| East Branch—Silverwood Lake | Old tower |
| East Branch—Lake Perris | Boat dock cove |
| East Branch—Lake Perris | Outlet tower |

are trained in quagga and zebra mussel identification, and are instructed to look for mussels during regular field work and during routine facility maintenance activities. No mussels were detected in the SWP, the Delta, or other SWP source waters.

To protect and prepare the SWP against mussels, ANS Program staff developed several planning documents to guide actions and identify vulnerabilities. The *Quagga and Zebra Mussel Vector Management Plan for the State Water Project* identifies potential mussel points-of-entry and vectors, and outlines mechanisms to reduce risk of introduction. The two primary vectors of mussels are downstream transport of planktonic veligers in natural and constructed waterways and overland transport of veligers and attached adults on watercraft. A critical component of the vector management plan is reducing the risk posed by watercraft; therefore, DWR is evaluating the feasibility and cost of implementing boat inspection programs at SWP reservoirs.

In the event mussels are detected in the SWP, the *Quagga and Zebra Mussel Rapid Response Plan for the State Water Project* outlines a course of action to confirm the sighting, delineate the population, implement containment and eradication measures, and notify State and federal partner agencies, the SWP water contractors, and any potentially impacted entities.

With uncontrolled watercraft access to and from infested bodies of water, such as the Colorado River, the SWP and the Delta remain vulnerable to mussel infestation. Therefore, DWR is preparing a long-term mussel management plan for the SWP. The plan will identify facility vulnerabilities and provide options to prevent or mitigate mussel biofouling impacts. An example of long-range planning is the incorporation of biofouling mitigation measures in Citrus Pump Station, a new facility planned for the terminus of the East Branch Extension.

Mussel mitigation measures were incorporated into the design, such as a chemical injection system and the widening of the intake channel to allow for mechanical removal of shell debris.

Shortly after the discovery of zebra mussels in San Justo Reservoir, ANS Program staff implemented a comprehensive applied research program at the reservoir. Because San Justo Reservoir receives CVP water from San Luis Reservoir through the Pacheco pipeline and has similar water quality, it acts as a surrogate for the larger SWP system. Important research findings included a summer spawning pattern, significant biofouling rates compared to other infested waterbodies, and reduced growth rates and survivability below the thermocline (low dissolved oxygen and high pH conditions). Antifouling coatings were tested with a significant difference in performance between the coatings.

More information about quagga and zebra mussels and State and federal interagency efforts is provided on DFW's website.

The Bay Delta Conservation Plan

The Bay Delta Conservation Plan (BDCP) is a current effort by DWR, Reclamation, Mirant Delta, LLC, and the State and federal water contractors to attain long-term take authorization under the CESA and ESA while providing for the conservation and management of covered species in the Sacramento-San Joaquin Delta. The BDCP was formed in 2006 and is comprised of a 26-member Steering Committee including federal and State fishery and water agencies, environmental organizations, and others. When completed, the BDCP will provide a plan to restore and protect water supply, water quality, and ecosystem health within a stable regulatory framework. The BDCP will comprise a Habitat Conservation Plan and

a Natural Community Conservation Plan. The goal of the BDCP is to restore habitat within the Delta in a way that allows reliable delivery of water throughout California.

In early 2009, the BDCP program held a series of 12 public scoping meetings throughout the State to gather public input on the BDCP EIR/EIS. At the same time BDCP Draft Conservation Strategy, which contains a suite of biological goals and objectives and conservation measures, was under development and refinement. Each of the draft conservation measures was evaluated by a team of 50 experts using the Delta Regional Ecosystem Implementation Plan process to assess their potential effectiveness. The conservation strategy was also the subject of several public workshops set up to introduce this critical component of the plan and allow the public an opportunity to comment on the approach.

More information is available on BDCP's website.

Biological Opinions Issued on the CVP/SWP Long-term Operations Criteria and Plan

The CVP and SWP Long-term Operations Criteria and Plan (OCAP) incorporates measures to provide protection for ESA-listed fish species. In July 2006, Reclamation requested reinitiation of ESA Section 7 consultation with NOAA Fisheries and USFWS regarding future combined CVP and SWP operations. Previous BOs were ruled inadequate in federal court. As a result, two new BOs were issued on the coordinated operations of the CVP and SWP.

USFWS Biological Opinion

On December 15, 2008, the USFWS issued a BO, which concluded that long-term coordinated SWP and CVP operations were likely to jeopardize the continued existence of delta smelt (*Hypomesus*

transpacificus) and adversely modify critical habitat for the species. The BO outlined five components of a reasonable and prudent alternative to ensure the long-term OCAP did not jeopardize the survival of delta smelt (Bulletin 132-09). In 2009, CVP and SWP were operating under a conditionally accepted reasonable and prudent alternative, despite lawsuits challenging the BO.

On July 16, 2009, based on a request from DWR, DFW found the USFWS delta smelt BO consistent with CESA for the authorization of take of delta smelt by the SWP.

NOAA Fisheries Biological Opinion

On June 4, 2009, NOAA Fisheries issued a BO on the effect of OCAP on salmonids and green sturgeon. The BO concluded that long-term OCAP was likely to jeopardize the continued existence of, as well as destroy or adversely modify the designated/proposed critical habitat for, federally listed species: endangered Sacramento River winter-run Chinook salmon (*Oncorhynchus tshawytscha*), threatened Central Valley spring-run Chinook salmon (*O. tshawytscha*), and threatened southern distinct population segment (DPS) of North American green sturgeon (*Acipenser medirostris*). The reasonable and prudent alternative includes specific actions for the Sacramento River, American River, East Side (Stanislaus River), and the Delta, as well as procedures for decision-making, monitoring, and adaptive management protocols.

On September 3, 2009, based on a request from DWR, DFW found the NOAA Fisheries BO to be consistent with CESA for the authorization of take of winter-run and spring-run Chinook salmon by the SWP.

SWP Longfin Smelt Incidental Take Authorization

On February 23, 2009, DWR received from DFW an incidental take permit for longfin smelt for SWP operations. Conditions of approval included pumping restrictions and

operational measures to minimize impacts, as well as habitat restoration measures to mitigate losses that cannot be avoided.

This permit will expire December 31, 2018.

Delta Operations for Delta Smelt and Longfin Smelt

A team of interagency scientists called the Smelt Working Group; formerly the Delta Smelt Working Group) met throughout 2009 to analyze current and projected conditions along with current monitoring data on smelt distribution, life stages, and salvage and recommended actions for water project

operations to minimize adverse effects on delta smelt and longfin smelt (*Spirinchus thaleichthys*). Recommended actions included limiting the magnitude of negative Old and Middle River flows.

Recommendations are made based on guidelines outlined in the 2008 USFWS BO aimed at reducing entrainment of adults migrating during and after the first flush (this is triggered by turbidity or salvage) and minimizing entrainment of larval delta smelt (this is triggered by water temperature, the presence of spawning adults, or larval smelt detected at salvage facilities).

Endangered Species and Biological Opinions

An endangered species is one in danger of extinction in all or a significant portion of its range; a threatened species is one likely to become endangered. The Endangered Species Act (ESA) and the California Endangered Species Act (CESA) are designed to protect threatened and endangered species by ensuring federal and State agencies adopt measures to protect the species during the design, construction, and operation of projects or for other forms of agency action and prohibit the unauthorized take of endangered species. Biological opinions and incidental take permits are issued to protect ESA and CESA listed species.

ESA Section 7 requires federal agencies to ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of listed species or modify their critical habitat, otherwise formal consultation is required. Federal agencies must consult with either the U.S. Fish and Wildlife Service and/or the National Marine Fisheries Service (wildlife agencies). As part of the consultation process, the wildlife agency issues a biological opinion which states the agency's determination of whether the action is likely to jeopardize a species or adversely modify critical habitat. If the wildlife agency determines an action will jeopardize or adversely modify, it will suggest reasonable and prudent alternatives that the "action agency" may take to avoid the likely jeopardy or adverse modification (Title 16, United States Code Sections 1531–1544 [1973]).

CESA is substantially similar to ESA in all aspects (California Fish and Game Code Sections 2050–2098 [1984]). Under CESA, an incidental take permit issued by the Department of Fish and Game can allow for the take of State-listed species if specific criteria are met, including measures to minimize and mitigate the impacts of authorized take (California Code of Regulations, Title 14, Sections 783.0–783.8).

In 2009, 479 delta smelt were salvaged by SWP facilities and 286 were salvaged by CVP facilities. These numbers are very low compared to the combined annual salvage of 2,038 at both facilities in 2008. Longfin smelt salvage was 22 at SWP facilities and 66 at CVP facilities in 2009, which are also low salvage levels compared with a combined salvage of 1,469 in 2008.

Decisions on Endangered Species

North American Green Sturgeon

The DPS of North American green sturgeon was listed as threatened under ESA in 2006 (see Bulletin 132-07). In October 2009, the final critical habitat designation was published by NOAA Fisheries in the Federal Register. The critical habitat designation includes the Sacramento River, lower Feather River, lower Yuba River, the Sacramento-San Joaquin Delta, and Suisun, San Pablo, and San Francisco bays.

Delta Smelt

Delta smelt were listed as threatened under both ESA and CESA in 1993. On July 10, 2008, the USFWS initiated a status review for delta smelt, based on a 2006 petition to reclassify the listing status from threatened to endangered (Bulletin 132-07). The comment period for this review closed on February 9, 2009, and the finding is expected to be issued in 2010. The Fish and Game Commission was also petitioned to change the State listing status from threatened to endangered in February 2007. On March 4, 2009, the Fish and Game Commission adopted regulations upgrading the delta smelt's status from threatened to endangered under CESA.

Longfin Smelt

On August 8, 2007, the Bay Institute, the Center for Biological Diversity, and the Natural Resources Defense Council

petitioned USFWS to list the Bay-Delta population of longfin smelt as threatened or endangered under ESA, and petitioned Fish and Game Commission to list longfin smelt statewide under CESA. On February 7, 2008, the Fish and Game Commission declared longfin smelt a candidate species, which initiated a 12-month review of the species' status by DFW.

On March 5, 2009, the Fish and Game Commission determined that longfin smelt should be listed as threatened through their range in California under CESA. However, by the end of 2009, the Fish and Game Commission had not yet adopted regulations to make the listing effective.

In May 2008, USFWS issued a 90-day finding that it would consider listing the longfin smelt Bay-Delta population as a DPS under ESA. The longfin smelt 12-month finding, released April 9, 2009, determined that the Bay-Delta population of longfin smelt was not a DPS, and therefore not a listable entity under ESA. On November 13, 2009, the Center for Biological Diversity filed a complaint challenging the merits of the USFWS determination.

Trends in Fish Abundance

The abundance index for longfin smelt, based on the DFW fall midwater trawl sampling from 1967 through 2009, is shown on Figure 3-1.

Figure 3-2 shows the abundance index for delta smelt, from 1967 through 2009, based on fall midwater trawl sampling conducted every year from September through December. Indices are calculated by multiplying average catch per trawl for 100 core index stations by a weighting factor that is based on the volume of water sampled. These values are summed to produce monthly and annual indices. The fall abundance index provides one of the best indicators of the status of the adult delta

smelt population. The 2009 index declined 26 percent from 2008 and was the lowest on record. Since 2002, abundance indices for this species have remained at markedly low levels. See the Pelagic Organism Decline section in this chapter for more about the declining abundance of delta smelt and other pelagic fish species in the Delta.

Figure 3-3 shows estimates of returning adult winter-run Chinook salmon from 1970 through 2009. These estimates, referred to as escapement estimates, are the number of adults that escape mortality and return to spawn. The Sacramento River winter-run Chinook salmon escapement estimates are generated using data from the DFW carcass survey. DFW has been using the carcass survey data to generate escapement estimates since 2001, prior to which Red Bluff Diversion Dam counts were used. The estimated winter-run Chinook escapement for 2009 was 4,537, which was moderately

higher than estimates for 2007 and 2008, but well below estimates for the 2001–2006 time period (7,441 to 17,296).

Figure 3-4 shows estimates of returning adult spring-run Chinook salmon from 1985 through 2009. Individual estimates are shown for FRFH and the principal spring-run spawning streams: Mill Creek, Deer Creek, and Butte Creek. The escapement estimates are shown separately for each stream, because the Feather River estimate is based on returns to the FRFH, where the genetic integrity of spring-run Chinook salmon is uncertain. The estimated escapement for 2008 was 898 for FRFH and about 2,492 for the other streams combined. The 2009 FRFH escapement was approximately 45 percent of the 2006 parent stock escapement estimate. The escapement of naturally spawned fish for Mill, Deer, and Butte creeks was about 31 percent of the 2006 parent stock.

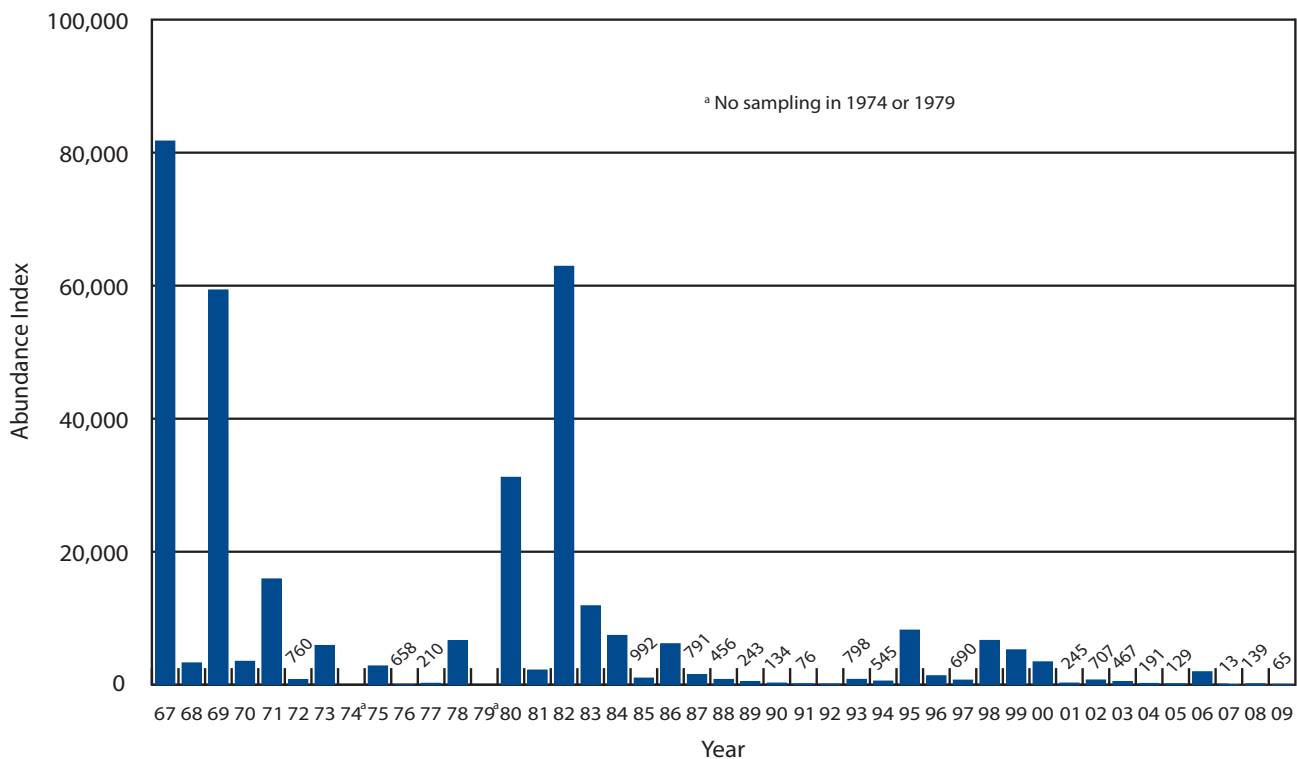


Figure 3-1 Longfin Smelt Fall Midwater Trawl Abundance Index, 1967–2009

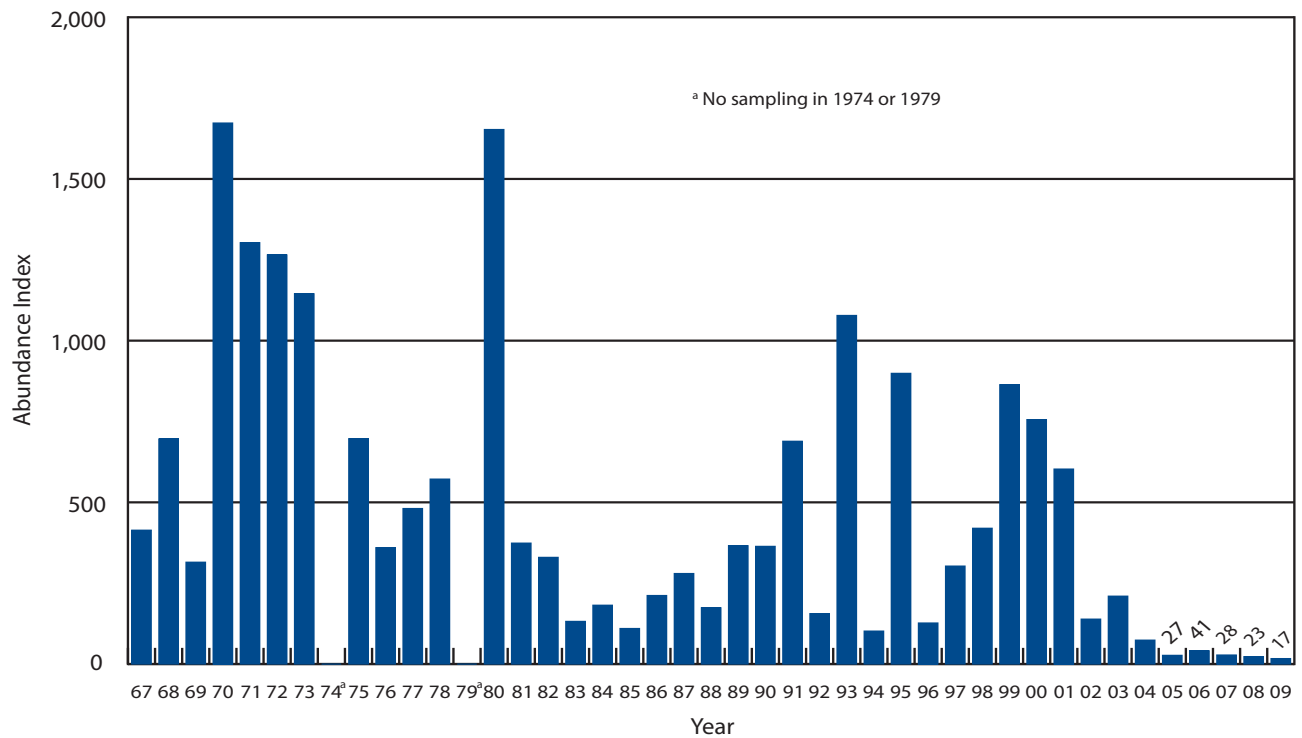


Figure 3-2 Delta Smelt Fall Midwater Trawl Abundance Index, 1967–2009

Due to lack of comprehensive monitoring programs, there are no reliable escapement estimates for wild Central Valley steelhead.

Feather River Fish Studies

In the early 1990s, the Feather River fish studies were initiated to document and monitor fish populations in the lower Feather River. Early efforts focused on studies to identify flow requirements for Chinook salmon and steelhead. The program has progressively expanded since the mid-1990s in preparation for the FERC relicensing of the Oroville Facilities. Field program elements have expanded to include operation of rotary screw traps (RST), acoustic and radio telemetry, salmon and steelhead spawning surveys, salmon escapement surveys, spring-run Chinook tagging, and otolith thermal marking studies.

Rotary Screw Traps

RSTs capture juvenile salmon and steelhead as they emigrate from the Feather River. Over the last 10 years, DWR has used RSTs as the primary method to assess the general abundance and timing of emigrating juvenile salmon and steelhead in the lower Feather River. In addition, large numbers of naturally produced salmon have been coded wire tagged (CWT) in an effort to examine their return success. This long-term monitoring yields valuable baseline information about juvenile salmonid production in the lower Feather River and the effects of project operations on abundance and migration timing.

Emigration timing and speed measurements confirm that most naturally produced juvenile Chinook salmon move rapidly through the upper reaches of the lower Feather River. Consistent with select years of trapping data, turbidity may influence

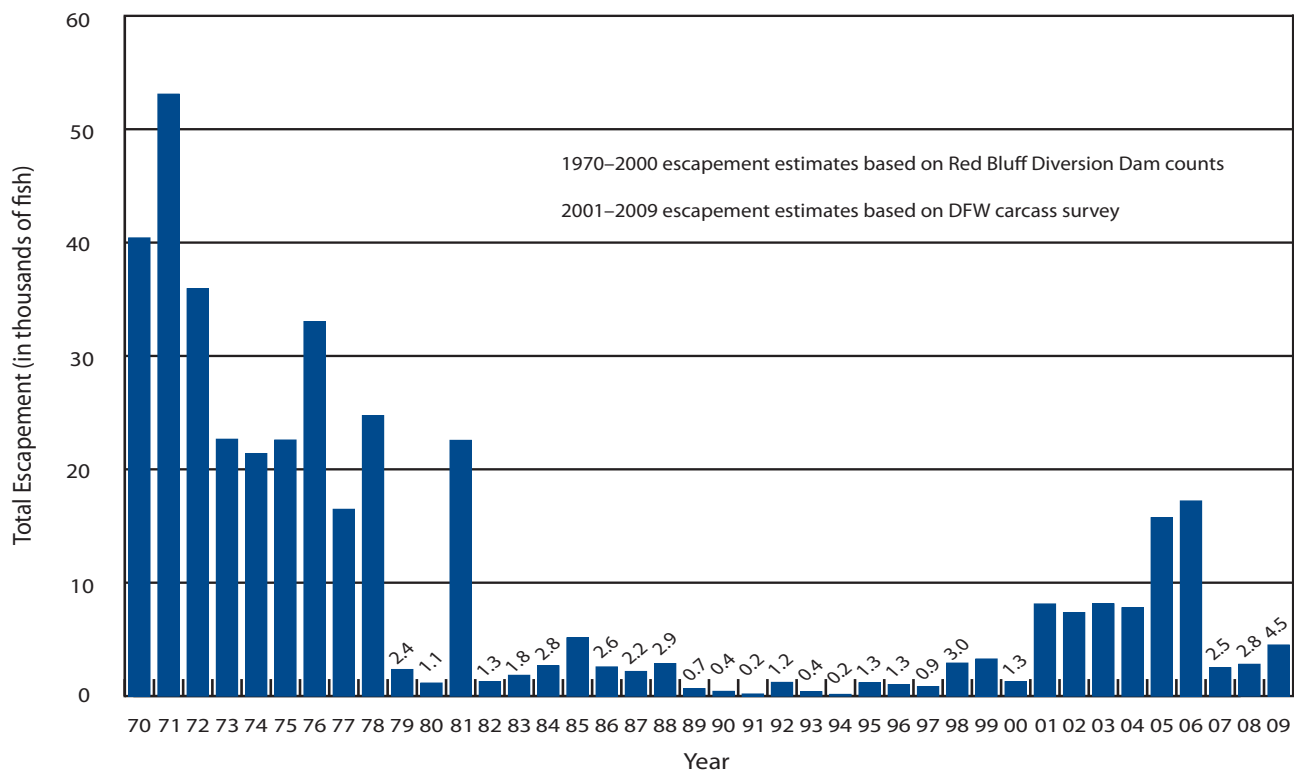


Figure 3-3 Estimated Total Adult Winter-Run Chinook Salmon Escapement, 1967–2009

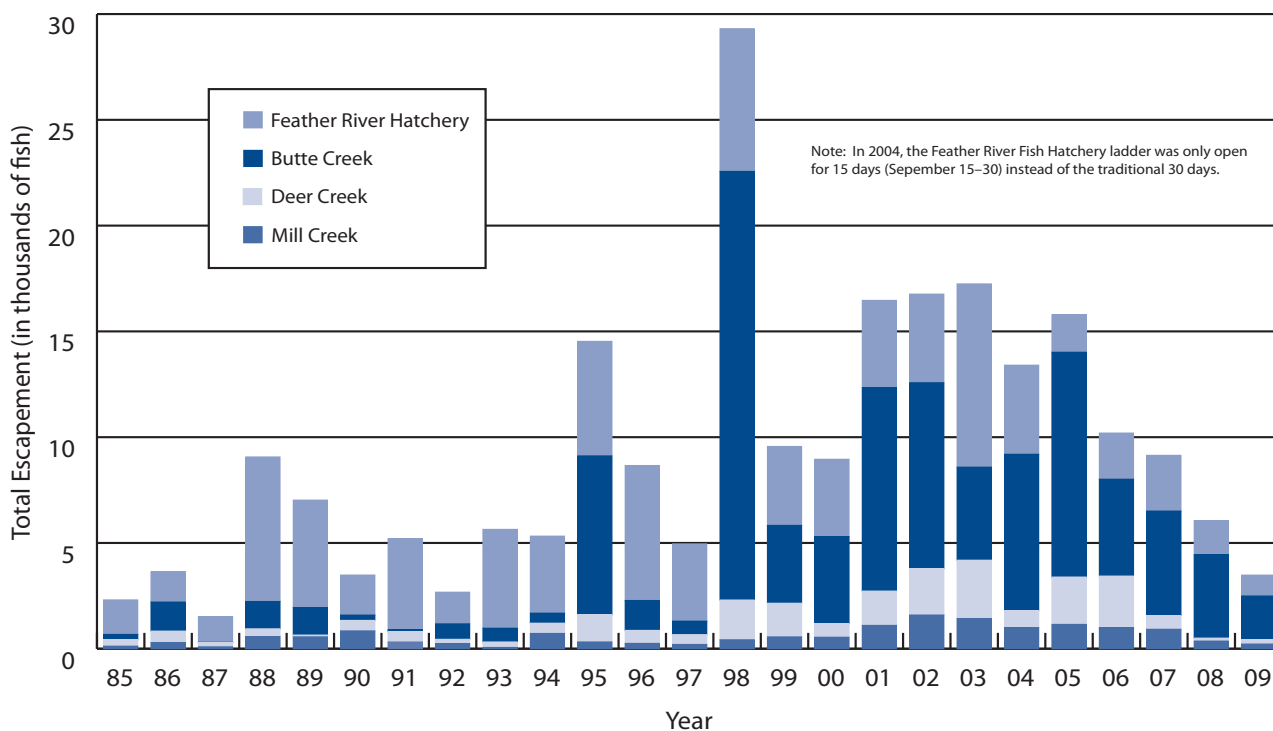


Figure 3-4 Estimated Total Adult Spring-Run Chinook Salmon Escapement, 1985–2009

the emigration timing of naturally produced juvenile salmon. However, other studies demonstrate that the timing of adult spawning plays a large role in determining juvenile salmon emigration patterns as well.

The 2009 season was fished throughout the emigration period (December through August). Two RST locations were used to assess the timing and general abundance of juvenile Chinook salmon, steelhead, and other fishes emigrating in the lower Feather River. Within the low-flow channel, one RST (Steep Riffle) was stationed at River Mile (RM) 61, approximately 2 miles above Thermalito Afterbay Outlet. Within the high-flow channel, two RSTs were fished in tandem 1 mile below Sunset Pumps at RM 37 from the beginning of December 2008 through the beginning of January 2009. These two traps were moved upstream just below Sunset Pumps at RM 38 and fished from January 2009 through August 2009. The estimates from these locations (RM 37 and RM 38) were combined because of their close proximity to one another. The Steep Riffle location provided a passage estimate of 2,080,266 juveniles, and the Sunset Pumps location estimate was 1,395,144 juveniles.

In 2009, a juvenile salmon mark and recapture study was conducted to evaluate in-river survival and emigration timing estimates in relation to environmental variables. The annual mark and recapture study began on January 5, 2009, when the first group of CWT salmon were released. Approximately 199,786 CWT fall-run fry (a juvenile fish newly hatched or newly emerged from a redd) and parr (a juvenile fish distinguished by vertical bars or spots [parr marks] on its sides) from 16 tag groups were released just above Thermalito Afterbay Outlet (RM 59) and evaluated for survival and timing of emigration during the study period. In total, 1,420 CWT salmon were recovered at the Sunset Pumps RSTs (RM 38). RST efficiency rates were used to determine an estimate that approximately

30,706 CWT salmon were recaptured during the entire study period. The last release of CWT salmon occurred on March 9, 2009, and the study ended on April 15, 2009, after substantial declines in CWT salmon recaptures were observed at the Sunset Pumps RSTs.

The average speed of the recaptured salmon fry was approximately 4.2 kilometers per day and the mean emigration time over 33 river kilometers was approximately 8 days. There was a statistically significant difference in the emigration timing between CWT release groups. However, despite variation throughout the study period, water temperature, turbidity, and flow did not have a statistically significant relationship with emigration time. The mean survival index for the CWT release groups (over a 33 kilometer river reach) was 0.12 ± 0.045 . There was no statistically significant relationship between the survival index and the three environmental variables measured at the time of release. However, there was a statistically significant relationship between the survival index and emigration time—as emigration time decreased, the survival index increased. Emigration timing and speed measurements confirmed that most naturally produced Chinook salmon move through the upper reaches of the high-flow channel rapidly, suggesting an ocean-type life history pattern. Contrary to other select years of trapping data, turbidity did not appear to influence the emigration timing of these naturally produced juvenile salmon.

Acoustic and Radio Telemetry

Acoustic and radio telemetry gathers baseline information on the migration and holding patterns of adult Chinook salmon in the river. A telemetry study was conducted to collect additional data to evaluate the relationship between water temperature and migration patterns of prespawning adult Chinook salmon in the Feather River below the Fish Barrier Dam.

Chinook salmon with a spring-run life history enter freshwater in early summer and hold in their natal tributaries up to several months before spawning. In order to collect additional data to evaluate water temperature and migration patterns of prespawning adult Chinook salmon, spring-run adult Chinook salmon are captured and tagged with Lotek radio tags or Vemco acoustic tags to document their habitat use. Because the water temperature regime associated with the ongoing operation of the Oroville Facilities may expose prespawning adult Chinook salmon to elevated water temperatures during the migration and holding period, radio and acoustic tagging was implemented to determine whether the pools downstream of the Thermalito Afterbay Outlet provide water temperatures suitable for holding.

In 2009, the number of spring-run Chinook salmon that returned to the lower Feather River was very low. Acoustic and radio telemetry tracking operations as well as in-river observations revealed that the vast majority of returning salmon were holding down river at the Thermalito Afterbay Outlet thereby delaying spawning operations at the FRFH. DWR and DFW decided to attract more spring-run salmon into the FRFH using a “pulse flow” down the low-flow channel. The increased flow and lower water temperature was thought to attract the salmon further up into the upper reach of the low-flow channel and then into the hatchery. Two attempts were made in June to attract additional adult spring-run Chinook salmon to the FRFH by increasing flows in the low-flow channel and simultaneously decreasing flows out of the Thermalito Afterbay Outlet into the high-flow channel. The first of these pulse flows was conducted on June 15, 2009, with an increase from 620 cfs to 1,500 cfs, and the second on June 26, 2009, with an increase from 620 cfs to 1,800 cfs. The data gathered during the 2009 spring-run acoustic and telemetry study was primarily used for the purposes of determining whether pulse flows

conducted in the low-flow channel have a positive effect on upstream migration.

During the 2009 lower Feather River spring-run tagging season, 32 spring-run salmon were implanted with Lotek radio tags and 10 were implanted with Vemco acoustic tags. Forty-one of these fish were caught at the Thermalito Afterbay Outlet (RM 59) between May 20 and June 11, 2009, and one was caught at Sunset Pumps (RM 38) on May 20, 2009. In addition to in-river tagging, 34 spring-run salmon were implanted with Lotek radio tags at FRFH between May 28 and June 18, 2009.

Of the 66 salmon tagged with Lotek radio tags, 58 were subsequently detected (29 tagged in-river and 29 tagged at FRFH). All 10 of the salmon tagged with Vemco acoustic tags were subsequently detected. For the purposes of determining whether a fish responded to a pulse flow, upstream movement was defined as having occurred between June 15, 2009, and June 18, 2009, or between June 26, 2009, and June 28, 2009, and with the assumption that a fish was physically subjected to the flow change (i.e., was in the low-flow channel or at Thermalito Afterbay Outlet when the pulse flow began).

For salmon tagged with Lotek radio tags, it was determined that approximately 25 percent of the fish showed a positive upstream response to the pulse flows. For salmon tagged with Vemco acoustic tags, 40 percent showed a positive upstream response to the pulse flows. It was determined that pulse flows have a positive influence on the upstream movement of adult salmon in the low-flow channel.

Spawning Surveys

Salmon and steelhead spawning surveys (redd surveys [a redd is a shallow depression in a streambed, excavated by a salmonid and containing deposited fish eggs]) are conducted to determine the abundance and distribution as well as physical

characteristics of natural spawning sites in the lower Feather River.

To better understand Feather River salmon and steelhead spawning characteristics, redd surveys are performed to identify the location, timing, and magnitude (where possible) of spawning in the lower Feather River. The survey is generally performed weekly, and most of the available spawning area between the Fish Barrier Dam and Honcut Creek is searched.

Salmon

The 2009 Chinook salmon redd survey was conducted between September 29 and November 16. An estimated 363 mature redds were found within the spawning area between Table Mountain Riffle (RM 66.9) and the Thermalito Afterbay Outlet (RM 59) in the low-flow channel. Six surveys were conducted during the 2009 spawning period. Survey 1 was conducted between September 16 and October 1, 2009, with the final survey performed on November 16, 2009.

During surveys 1 through 3 (September 29 through October 22), 72 percent of redds found during the entire survey period were recorded. Lower Auditorium Riffle (RM 66.4) contained the largest amount of spawning area with 42 percent of the total number of redds. The average depth for all recorded spawning areas was 0.41 meters with a water velocity of 0.90 meters per second. The dominant substrate size was between 5 and 15 centimeters.

Steelhead

Thirteen weekly steelhead redd surveys were performed between December 22, 2008, and April 1, 2009. A total of 5 adult steelhead and 28 redds were observed during the sampling period. Redd construction likely began sometime in late December, peaked in late January, and was essentially completed by the beginning of March. In December,

January, February, and March, steelhead constructed, at minimum, 4, 13, 9, and 4 redds, respectively. The surveys revealed that more than half (71 percent) of all redds were constructed in the uppermost mile of the lower Feather River (between RM 66 and 67), between the Table Mountain Bicycle Bridge and Lower Auditorium Riffle. This section of river maintained 20 redds per mile, two-thirds greater than any other section. Hatchery Ditch alone had 13 redds constructed within it, more than five times more redds than were constructed in any other location.

Salmon Escapement Survey

The purpose of the salmon escapement survey is to evaluate the abundance, distribution, and timing of in-river Chinook salmon spawning.

The survey provides information crucial to monitoring, managing, and conserving the Feather River's salmon populations. The data are used to identify trends in population and age structure, track patterns in spawning distribution, determine proportions of hatchery versus wild fish, and explore environmental effects on salmon survival rates. Estimating the number of salmon returning to spawn is the basic goal of the carcass survey. This estimate is based on a weekly mark and recapture experiment in which salmon carcasses are tagged, chopped, and placed back into the river. The rate at which tagged carcasses are recovered (the recovery rate) relative to the number of carcasses checked for tags (chopped) provides the basis for an estimate of the total population.

Due to low numbers of returning fish in 2009, the data from the low-flow channel and high-flow channel were pooled to generate one estimate for the lower Feather River. A pooled Peterson estimator is used to calculate the escapement estimate. For the lower Feather River, the estimate was 4,954. There were an estimated 920 grilse (fish

≤ 65 centimeter fork length). These estimates include both fall-run and spring-run Chinook salmon since their spawning is currently not fully segregated on the Feather River. Approximately 95 percent of the spawning population utilized the low-flow channel. Since 2000, the long-term average for the low-flow channel's spawning population is 76 percent.

Spring-Run Chinook Salmon Tagging

To better understand spring-run Chinook salmon life history in the Feather River, a program was developed to mark spring-run Chinook salmon entering FRFH. The spring-run Chinook salmon tagging program segregates spawning of spring- and fall-run Chinook salmon in the hatchery. The program also investigates potential differences in spawning distribution and timing of the early arriving spring-run salmon in the river. Early arriving spring-run salmon entering the hatchery were marked with individually numbered Hallprint dart tags for identification. Once marked, the fish were released back in the river and allowed to over-summer. During the hatchery spawning season, the mark enabled hatchery staff to distinguish the early arriving spring-run fish from the fall-run fish, so that spring-run fish could be spawned separately from the fall-run. The mark also enabled the escapement survey crew to differentiate spring- and fall-run salmon, so that any potential differences or trends in the in-river spawning behavior of the two runs could be analyzed.

In 2009, 1,462 Central Valley spring-run Chinook salmon were tagged at FRFH. Tagging began on May 28 and ended on July 8. This was the fewest number of fish tagged since the program began in 2004. When spawning commenced in the fall, a total of 1,111 were recaptured: 989 at the FRFH and 122 in the river escapement survey.

Otolith Thermal Marking Studies

The Chinook salmon run in the Feather River consists of both Central Valley spring-run and fall-run fish, both of which are heavily supplemented by the FRFH. In order to effectively determine the composition of the run (spring-run versus fall-run) and the origin of the fish (hatchery versus naturally produced), DFW and DWR developed an otolith thermal marking program for the FRFH. Thermal marking is an efficient method to mark 100 percent of the fish produced at the hatchery.

In 2005, 100 percent marking of spring- and fall-run Chinook salmon began. In 2009, all returning salmon were thermally marked (ages 2 through 5 years) and analysis of otoliths began. With continuation of this program, DWR will be able to definitively determine the origin and the proportions of spring- and fall-run fish within the river and the hatchery. With known origin and race, more advanced otolith analysis techniques can be employed to investigate potential differences in life history strategy for fall- and spring-run fish, as well as hatchery and naturally produced Chinook salmon. This will provide valuable information to evaluate the effectiveness of past management decisions aimed at the recovery of natural-origin Chinook salmon and guide future restoration actions.

Pelagic Organism Decline in the Upper San Francisco Estuary

By the early 2000s, long-term monitoring by the Interagency Ecological Program (IEP) revealed marked declines in numerous pelagic (open water) fish species in the upper San Francisco Estuary (the Delta and Suisun Bay). This decline has collectively become known as pelagic organism decline (POD).

Abundance indices calculated from several IEP monitoring programs continued to indicate record and near-record lows in 2009 for resident pelagic fish of the upper estuary, including delta smelt, longfin smelt, striped bass, and threadfin shad. These declines have had several significant management consequences, including limits to pumping to protect delta smelt and the proposed listing of longfin smelt as a threatened species.

Since 2005, IEP scientists have been coordinating studies investigating potential causes of POD. Based on the 2007 synthesis of results (see Bulletin 132-08), research objectives for 2008 shifted in focus from identifying factors that could have caused POD, to identifying what factors may be continuing to keep populations depressed. Activities in 2009 largely extended and expanded upon 2008 studies, with the addition of modeling components and efforts to integrate results.

The full report, *Pelagic Organism Decline Progress Report: 2007 Synthesis of Results*, is available on DWR's website.

Additional information can be found in the *Pelagic Fish Action Plan*, published in March 2007, available from the Delta Initiatives website.

Fish-Related Mitigation Projects

In 1986, DWR and DFW signed the Delta Pumping Plant Fish Protection Agreement (Delta Fish Agreement) to annually provide funds to offset direct losses of Chinook salmon, steelhead, and striped bass at Banks Pumping Plant. The Delta Fish Agreement is commonly referred to as the Four Pumps Agreement because it was adopted as part of the mitigation for four additional pumps at Banks Pumping Plant. Direct losses are defined as losses of fish that occur from the time fish are drawn into Clifton Court Forebay until the surviving fish are returned

to the Delta. In principle, DFW and DWR intended this agreement to offset direct losses of all fish caused by the diversion of water by the pumping plant starting in 1986. However, at that time, information on impacts and measures to offset those impacts was sufficient only to deal with Chinook salmon, steelhead, and striped bass. The agreement allowed for addressing impacts on other fish species once impacts could be identified and measures could be developed that would offset such impacts.

The process that led to this agreement included an advisory committee of representatives from interest groups concerned with fish resources affected by the SWP, including, but not limited to, representatives of the SWP water contractors, sport and commercial fishing groups, and environmental groups. The agreement formalized the Delta Pumping Plant Fish Advisory Committee.

To mitigate fish loss, mitigation projects are selected and funded by the Delta Fish Agreement. The agreement outlines how project proposals are reviewed and selected for funding and gives priority to mitigation measures for habitat restoration and other nonhatchery measures. Under the agreement, DWR calculates fish loss as prescribed in the agreement, and approved mitigation projects earn fish mitigation credits to satisfy the fish loss mitigation provisions in the agreement. Mitigation is on a fish-for-fish basis.

The agreement provides for two funding components. One component is the Annual Mitigation Account for compensating the annual fish loss. It has no expiration date. The second is a \$15 million Lump Sum Account provided by DWR for additional projects to compensate for post-1986 fish loss. The agreement specifies that the \$15 million must be expended by December 29, 1996.

DWR and DFW work with the Delta Pumping Plant Fish Advisory Committee to review the success of the agreement in offsetting the direct effects of diversions by Banks Pumping Plant. If warranted, the agreement can be renegotiated to fulfill SWP's responsibilities to compensate direct fish loss. The agreement requires DWR and DFW to conduct an annual review and report the results.

The Delta Fish Agreement has been amended three times:

- Amendment 1 (1996)—extended the period to expend the remaining \$9 million of the \$15 million to December 29, 2001;
- Amendment 2 (2001)—extended the period to expend the remaining \$5 million of the \$15 million to December 31, 2004; and
- Amendment 3 (2004)—extended the period to expend the remaining \$3.6 million of the \$15 million to December 31, 2007.

In 2009, a fourth amendment was being drafted to extend the period to expend the remaining \$1.6 million of the \$15 million to December 31, 2015.

Since 1986, DWR has spent \$53 million on mitigation projects developed under the Delta Fish Agreement. (For a list of some of the mitigation projects initiated, approved, or implemented in association with the agreement, see Bulletin 132-09.) Mitigation fund expenditures through December 31, 2009, were \$40.6 million for the Annual Mitigation Account and \$13.3 million for the \$15 million Lump Sum Account. Funds approved but unexpended from each account were \$8 million and \$1.6 million, respectively. Mitigation projects with approved, unexpended funding are shown in Table 3-4.

During 2009, DFW and DWR continued negotiations to address the losses of delta smelt, longfin smelt, winter-run Chinook salmon, and spring-run Chinook salmon and to determine the required mitigation for those fish losses. By the end of 2009, the Fish Restoration Program Agreement was being drafted in response to the OCAP BOs (USFWS and NOAA Fisheries).

Table 3-4 Delta Fish Agreement Funding Approved but Unexpended (Including Encumbrances), as of December 31, 2009

| \$15 million Lump Sum Account | Unexpended (dollars) |
|---|-----------------------------|
| Deer Creek Water Exchange Operations and Maintenance | 764,000 |
| San Joaquin Salmon Spawning and Habitat Projects | 849,000 |
| Annual Mitigation Account | Unexpended (dollars) |
| San Joaquin River Fish Barrier | 74,000 |
| Merced River Salmon Spawning and Habitat Projects | 1,123,000 |
| Merced River Fish Hatchery Operations and Maintenance | 3,359,000 |
| Mill Creek Water Exchange Operations and Maintenance | 683,000 |
| Deer Creek Water Exchange Operations and Maintenance | 1,187,000 |
| Enhanced Enforcement | 1,255,000 |
| Suisun Marsh Fish Screen O&M | 48,000 |

Climate Change

In this century, climate change will have a dramatic effect upon water supply, flood management, and ecosystems.

Studies

Completed in 2009

During 2009, DWR published *Using Future Climate Projections to Support Water Resources Decision Making in California*. This report documents work over the last several years on climate change impacts on SWP operations.

The topics covered in the report include:

- sea level rise projections;
- evaluation of global climate models' representation of California's historical climate;
- methods for using climate change projections to estimate future streamflows; and
- impacts of increasing air temperatures on snowpack, runoff, and surface and subsurface flow in the upper Feather River Basin.

Ongoing during 2009

DWR continued its monitoring and analyses of regional observed and simulated historical period climate data. The studies included continuous detection and attribution studies through the analysis of regional historical data. Some insights gained from further analysis of long-term historical precipitation data are being reviewed. Another study focused on the continuous evaluation of simulated historical period streamflow data as a bridge to the ongoing study of the impact of climate change on streamflows and hence California's water projects.

Initiated during 2009

Executive Order S-13-08 directed State agencies to consider a range of sea level rise scenarios for the years 2050 and 2100 to assess project vulnerability, reduce expected risks, and increase resiliency to sea level rise. In response, DWR identified funding partners and prepared a scope of work for a contract with the National Research Council to estimate a range of likely sea level rise in 2030, 2050, and 2100. The study is a cooperative effort between the U.S. Army Corps of Engineers, National Oceanic and Atmospheric Administration, U.S. Geological Survey, and the States of Oregon, Washington, and California. The study is expected to commence by the end of 2010 and conclude in early 2012.

DWR also began development of a study to evaluate the benefits of reoperation of water supply systems throughout California. The study will look at opportunities to integrate and reoperate State, federal, and local flood protection facilities, water supply systems, and groundwater basins to increase water supply reliability and flood protection, improve water quality, reduce groundwater overdraft, and provide for ecosystem protection and restoration. The impacts of appropriate scenarios of future climate change will be integrated into the analysis.

DWR and the U.S. Forest Service initiated investigations of the hydrologic effects of upper watershed restoration. Natural, undegraded mountain meadow areas typically have deep soils, dense vegetation, and a naturally developed drainage pattern where water flows across the flat meadow surface and infiltrates the soil. Meadows typically remain fully saturated for most of each year and store substantial quantities of groundwater in their soils, acting as natural reservoirs of water at high elevations. Degraded meadows typically exhibit "gully erosion," in which shallow channels are deeply eroded and all water entering the meadow drains rapidly into stream channels, eliminating the beneficial hydrologic effects of meadow areas. This investigation will identify how restored meadows can contribute to improved system operation as well as ecosystem functioning.

Energy and Greenhouse Gas Emissions

Integrated Resource Plan for the SWP

To assist in reducing SWP's reliance on fossil-fired power generation, with its associated adverse impacts, DWR has developed an integrated resource plan for procuring power that will increase the use of renewable energy as part of SWP's power portfolio, and thereby reduce greenhouse gas emissions in California. This plan is consistent with State policy

and the goals established by the Governor's Executive Order S-03-05 (which established greenhouse gas emission reduction goals for California).

2008 Emissions Reports to the California Climate Action Registry and the California Air Resources Board

DWR continued to report its estimated total direct and indirect carbon dioxide emissions to the California Climate Action Registry. The emissions are the result of the SWP power purchase transactions, energy consumed at DWR-occupied buildings, and fuel used by DWR's on- and off-road vehicles and field equipment. DWR's California Climate Action Registry greenhouse gas emission report was audited and approved by an independent third party-certifier. Ninety-nine percent of DWR's emissions in 2008 were the result of SWP power purchases. In June 2009, DWR also reported to the California Air Resources Board the energy generated and consumed by the SWP and estimated sulfur hexafluoride associated with the SWP's transmission yard electrical equipment in 2008.

Addressing Climate Change and Greenhouse Gas Emissions in CEQA Documents

In June, DWR formally established the California Environmental Quality Act (CEQA) Climate Change Committee to review all climate change analyses in DWR environmental documents, including those related to SWP projects. The committee has already developed environmental analysis methodologies and reference materials for use by department staff and consultants. These methodologies and materials help DWR comply with environmental documentation required to implement laws, regulations, and other operational mandates pertaining to climate change and to provide a consistent approach to conducting project-specific environmental analyses for CEQA compliance documents, biological assessments, permit applications,

and other environmental needs. Because of the evolutionary nature of climate change analysis, these documents will be updated periodically.

For more information, visit DWR's website.

Environmental Document Review

The Environmental Document Review Section in DWR's Division of Environmental Services screens State Clearinghouse documents and circulates SWP-related materials for review by the Division of Integrated Regional Water Management, O&M, and Division of Engineering. Other divisions and offices are notified and asked to comment when their expertise is required.

Some environmental documents handled by the State Clearinghouse concern proposed activities that would affect the SWP. Such documents are regularly reviewed to identify any public safety or liability issues arising from the proposed activities.

During 2009, the Environmental Document Review Section tracked documents related to development along the California Aqueduct, levee encroachment, dam safety issues, water transfers and other water supply issues, wastewater treatment, quarry development, electrical transmission lines near SWP facilities, and development of a high-speed rail.

DWR comments submitted through the CEQA and/or National Environmental Policy Act (NEPA) processes addressed a number of issues, including runoff from proposed developments, safety and water supply, encroachment on physical facilities, and impacts to cross-drainage facilities.

In 2009, the Environmental Document Review Section screened 3,476 State Clearinghouse documents. A total of 710 referrals were made for detailed review.

The actual number of documents referred was somewhat less since some documents were referred to multiple reviewers. Of these referrals, 507 were made when the projects were at the notice of preparation or early consultation stage, and 203 assignments were for negative declarations, EIRs, and NEPA environmental assessments.

O&M received 151 formal referrals and one for information. The State Water Project Analysis Office (SWPAO) received 35 formal referrals and three for information. In addition to the information referrals made to O&M and SWPAO, 681 other information referrals were made to other DWR staff.

The total number of referrals to O&M and SWPAO increased by about 18 percent over 2008. Factors contributing to this increase include more development planned near SWP facilities and the scale and type of individual proposals such as road and highway improvements near the California Aqueduct, which are infrastructure improvements rather than development proposals.

In 2009, referrals were down by 26 percent from 2008. Part of this reduction may be due to the lack of funding to start new construction projects, which was related to the economic downturn. Part of this reduction may also be attributed to an increase in administrative-type projects (such as master plans, implementation plans, and transportation plans plus “elements” of these plans, as in “housing element” and others). Many of the documents for administrative-type projects would be of little or no interest to DWR. In 2009, there was a 69 percent increase in these—from 167 to 283 combined.



Chapter 4

Water Quality Programs

The Suisun Marsh Salinity Control Gates.

Significant Events in 2009

The 2008–2009 water year hydrologic classifications for the Sacramento and the San Joaquin valleys were “dry” and “below normal,” respectively, based on observed data.

For the first time since the *Vernalis Adaptive Management Plan* (VAMP) was implemented, the “Sequential Dry-Year Relaxation” condition was triggered, meaning that no VAMP target flow would be defined and no supplemental water for river flows was provided.

The temporary rock barrier normally installed across Head of Old River in the fall was not installed. Instead, a nonphysical “bubble barrier” was installed as a pilot test to prevent salmon from entering Old River.

Information in this chapter was contributed by the Division of Environmental Services and the Division of Operations and Maintenance.

The State Water Project (SWP) is the largest state-built, multipurpose water project in the United States. California's existence and continued prosperity depends on water. More than two-thirds of the people of California rely partly or wholly on the SWP for their daily water needs. The Department of Water Resources (DWR), Division of Operations and Maintenance currently maintains 16 automated water quality monitoring stations at key locations along the SWP. This network of automated stations continuously monitors a variety of water quality parameters throughout the system and provides real-time data to SWP water contractors. In addition, field grab samples collected weekly, monthly, quarterly, or annually from more than 30 SWP locations are routinely analyzed for a broad range of constituents at the State's Bryte Chemical Laboratory.

Delta Activities

The State Water Resources Control Board (SWRCB) establishes water quality objectives and monitoring plans to protect a variety of the beneficial uses of water. The water quality objectives are set at points of delivery under Article 19 of the long-term SWP water supply contracts. The California Department of Public Health (DPH) establishes maximum contaminant levels for treated drinking water.

Water quality in the Delta and Suisun Marsh is protected under SWRCB's Water Right Decision 1641 (D-1641), adopted in December 1999. SWRCB's issuance of D-1641 is part of its implementation of the 1995 *Water Quality Control Plan (WQCP) for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary* (Bay-Delta Plan) and, accordingly, this decision amends certain water rights of water rights holders to help achieve the plan's objectives. SWRCB ensures these objectives are met in part by the inclusion of water quality monitoring requirements in D-1641 as operating conditions for the SWP and Central Valley Project (CVP). For more background information about SWRCB and the Bay-Delta Plan, see the sidebar, State Water Resources Control Board.

DWR conducts extensive monitoring to protect beneficial uses of water in the

Delta and the Suisun Marsh, as required by D-1641. Figure 4-1 shows water quality compliance and monitoring stations throughout the Sacramento-San Joaquin Delta specified by D-1641.

Water Supply Conditions

Water Year Classifications and Water Supply Indexes

SWRCB's D-1641 contains water quality and flow standards that are conditioned by water year type and generally become less stringent in years with less precipitation. The water year classification system provides relative estimates of a basin's available water supply based on the amounts of rainfall, snowmelt runoff, and groundwater accretion rates. Water year types are classified as "wet," "above normal," "below normal," "dry," or "critical."

The Sacramento Valley Water Year Hydrologic Classification (Sacramento Valley 40-30-30 Index) and the San Joaquin Valley Water Year Hydrologic Classification (San Joaquin Valley 60-20-20 Index) were dry and below normal, respectively, based on observed data for water year 2008-2009. (For a detailed discussion of water year 2008-2009, see Chapter 8, Water Supply.)

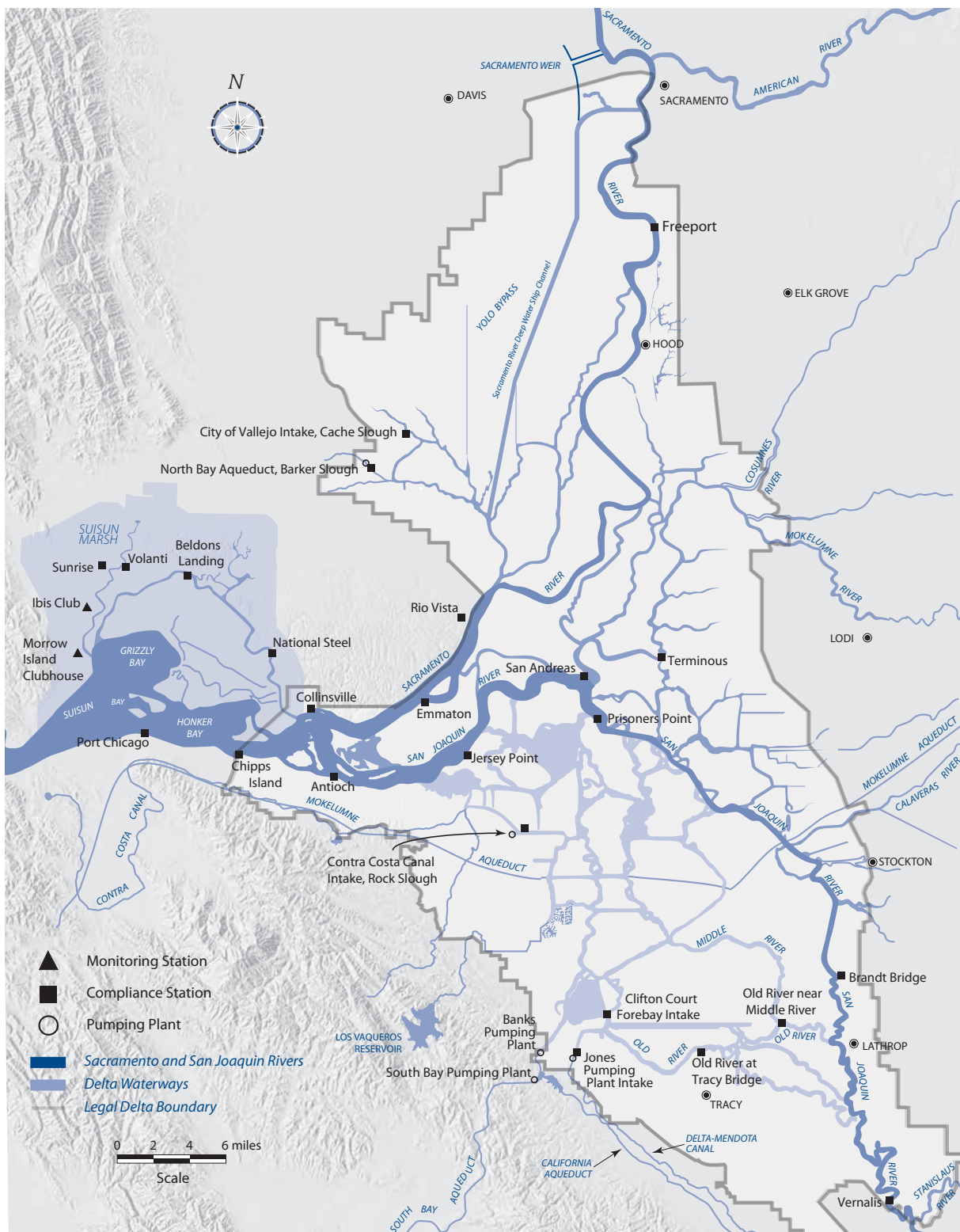


Figure 4-1 Decision 1641 Water Quality Compliance and Monitoring Stations in the Sacramento-San Joaquin Delta

State Water Resources Control Board

The State Water Resources Control Board (SWRCB), established by the California Legislature in 1967, oversees water rights and protects water quality by setting and implementing statewide policy, administering appropriative water rights, coordinating with and supporting Regional Water Quality Control Board (RWQCB) efforts, and reviewing petitions that contest RWQCB actions. The five SWRCB members are appointed by the Governor and confirmed by the Senate. SWRCB is responsible for four major programs.

Water quality: to preserve, protect, enhance, and restore water quality.

Water rights: to issue permits for water rights specifying amounts, conditions, and construction timetables for diversion and storage.

Financial assistance: to assist local agencies and individuals with pollution prevention or clean-up.

Enforcement: to enforce water rights and water quality laws and regulations.

Under their water quality authority, the SWRCB and RWQCBs adopt water quality control plans (WQCPs) for the 16 planning basins in the State. The WQCPs contain water quality objectives for flow, salinity, dissolved oxygen levels, and other parameters necessary for the protection of various beneficial uses, such as municipal and industrial, agricultural, and fish and wildlife. SWRCB implements these objectives in a number of ways, depending on the circumstances, including imposing conditions on water right permits and licenses.

State Water Project (SWP) and Central Valley Project (CVP) responsibilities for meeting Delta water quality objectives are dictated by the WQCPs and SWRCB water right decisions which impose conditions on SWP and CVP water right permits and licenses.

Current water quality objectives for the Delta and Suisun Marsh are contained in the *WQCP for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary*, adopted December 13, 2006 (2006 Bay-Delta Plan). Water Right Decision 1641 (D-1641) implements the objectives in the 2006 Bay-Delta Plan. SWP and CVP are operated in coordination to meet the terms in D-1641 and other applicable regulatory requirements relevant to each project.

SWRCB is required to conduct periodic updates of the Bay-Delta Plan. As part of the update process, SWRCB conducts proceedings to gather information, receive recommendations, consider public comments, and facilitate detailed discussions to evaluate new information relevant to potential changes to the water quality objectives.

Some of the recent issues of concern related to the WQCP include pelagic organism decline, salmonids, Delta inflow, San Joaquin River flows, and southern delta salinity.

In July 2008, SWRCB adopted the *Strategic Workplan for Activities in the San Francisco Bay/Sacramento-San Joaquin Delta Estuary*, which prioritizes and describes the scope of individual activities and provides specificity regarding timelines and resource needs for implementing coordinated activities in the Bay-Delta. Several updates to the workplan have been issued by SWRCB.

Operations Under SWRCB Water Right Decision 1641

In 2009, DWR and the Bureau of Reclamation (Reclamation) jointly operated the SWP and CVP in accordance with SWRCB's D-1641 which includes water quality, flow, and operational criteria for the Delta. Operations of the projects were coordinated with various objectives of the Bay-Delta Plan, Central Valley Project Improvement Act, and biological opinions (BOs) for listed species.

As mentioned above, the water quality and flow criteria contained within D-1641 are conditioned by water year type. Specifically, the Sacramento Valley 40-30-30 Index water year type forecast on May 1 of each year determines the water year type for the implementation of flow and water quality criteria contained in D-1641. In 2009, the SWP and CVP were operated using water quality and flow criteria based on the May 1 forecast of a dry water year for the Sacramento River basin.

Delta Cross Channel Gates

The Delta Cross Channel gates are operated in accordance with SWRCB D-1641. In 2009, the gates were open for 169 days to allow fresher Sacramento River water to flow into interior Delta channels toward the SWP and CVP export facilities. Reclamation's standard operating procedures call for gate closure when flow on the Sacramento River at Freeport reaches between 20,000 cubic feet per second (cfs) and 25,000 cfs to reduce flooding potential on the Mokelumne River and to prevent scouring on the downstream side of the gate structure. D-1641 contains measures that require gate closure under certain conditions from November 1 through May 20 for fisheries protection as requested by USFWS, NOAA Fisheries, and DFW.

Water Quality Standards

Water quality objectives in D-1641 are categorized by the beneficial uses they are intended to protect, including municipal, industrial, agricultural, and fish and wildlife. DWR operators adjust upstream releases and Delta exports in order to meet D-1641 water quality and flow standards. D-1641 contains salinity standards (recorded as electrical conductivity [EC]) for three stations in the South Delta downstream of Vernalis. The stations are primarily influenced by San Joaquin River flow and in-Delta diversions. San Joaquin River flows are not influenced by SWP upstream reservoirs, but local water levels may be influenced by SWP exports, and circulation may be influenced by the annual placement of South Delta barriers. For more information about the South Delta barriers, see Chapter 2, Delta Resources, and Chapter 3, Environmental Programs.

Municipal and Industrial Objectives

D-1641 includes a year-round 250 milligrams per liter (mg/L) (maximum mean daily) chloride objective that is in effect at Delta export locations (Contra Costa Canal Pumping Plant No. 1, Clifton Court Forebay, Jones Pumping Plant, Cache Slough at the City of Vallejo Intake, and Barker Slough). Chloride levels remained below the objective for 365 days in 2009.

An additional municipal and industrial water quality objective for chloride at the Contra Costa Canal Intake, near Rock Slough, specifies that the chloride level must be below 150 mg/L for a given number of days during the year, dependent upon the water year forecast.

Agricultural Objectives

D-1641 contains agricultural salinity objectives, which vary by location. The salinity objectives, recorded as EC, are based on both water year type and a 14-day running average during the irrigation season, from April to mid-August, at

Emmaton, Jersey Point, Terminus, and San Andreas in the West and Central Delta. The agricultural salinity objectives at these Delta locations become less stringent under dryer conditions. Emmaton and Jersey Point met the objective in 2009. (Data for Terminus and San Andreas were not available.)

In the South Delta, the salinity objectives are based on a 30-day running average. The 0.7 millisiemens per centimeter (mS/cm) objective for the South Delta was not met at Brandt Bridge, Old River near Middle River, and Old River near Tracy Road Bridge. The SWP and CVP are jointly required by D-1641 to meet the agricultural EC objectives imposed at these South Delta compliance locations. (See also, Chapter 2, Delta Resources, and Chapter 7, Water Supply Development and Reliability.)

Estuarine Habitat Protection Standard

The estuarine habitat protection standard incorporates modified X2 criteria (geographic isohaline) first established in the 1994 delta smelt BO. The upstream movement of 2 ppt isohaline (2 parts per thousand of salt in the water), measured as 2.64 mS/cm at the surface, is maintained within a certain range of positions in the estuary by adequate Delta outflow. These positions (Collinsville, Chipps Island, Port Chicago, or Martinez) are associated with an abundance of fish and biota.

The requirement for meeting X2 criteria at Collinsville applies to all days during February through June. The number of days per month when the daily average EC maximum (2.64 mS/cm) is in effect at Chipps Island or Port Chicago is conditioned by the previous month's Eight River Index (more information about this can be found in Chapter 8, Water Supply). This may alternately be met with a maximum 14-day running average EC of 2.64 mS/cm or with specific Delta outflow, set as a 3-day average Net Delta Outflow Index (NDOI) of 7,100 cfs,

11,400 cfs, or 29,200 cfs, when the X2 position is at Collinsville, Chipps Island, or Port Chicago, respectively. The Port Chicago standard becomes effective when the Port Chicago 14-day EC average, immediately prior to the first day of the month, is less than or equal to 2.64 mS/cm.

The Eight River Index, for January through May 2009, in million acre feet, was 0.96, 2.32, 3.64, 2.4, and 4.21, respectively. The X2 habitat protection objective at Chipps Island was 24 days in February, 31 days in March, and 30 days in April.

Additionally in 2009, the X2 habitat protection objective at Port Chicago was not triggered.

Net Delta Outflow Index Standard

Delta outflow cannot be measured directly due to the tidal influence in the Delta. Instead, an approximation of Delta outflow is calculated using measured inflows, exports, and estimated Delta water use. The NDOI was introduced in the 1995 Bay-Delta Plan and is now part of D-1641. NDOI calculates Delta outflow using inflows of the Sacramento River, the Yolo Bypass system, the eastside stream system (consisting of the Mokelumne, Cosumnes, and Calaveras rivers), the Sacramento Regional Treatment Plant, and a measurement of San Joaquin River flow at Vernalis.

Excess outflow conditions, as defined by the Coordinated Operations Agreement, allow for greater flexibility in project operations.

D-1641 sets specific minimum monthly NDOI standards for the protection of fish and wildlife based on water year type. In 2009, the monthly mean NDOI was highest in February, averaging 21,000 cfs. The monthly mean NDOI remained above 3,000 cfs during all months of the year, with the lowest monthly mean NDOI occurring in September, with 3,340 cfs. All NDOI standards were met in 2009.

River Flow Standards

D-1641 includes minimum flow requirements measured in the Sacramento River at Rio Vista. These flow standards, incorporated from the winter-run salmon BO, set flow requirements based on the May 1 Sacramento Valley water year classification forecast. Water year 2008–2009 was forecast to be dry, requiring mean monthly flows of 4,000 cfs for October and 4,500 cfs for November and December. During these periods, the 7-day running average could not be more than 1,000 cfs below the monthly standard. The actual mean monthly flows were 5,298 cfs for September, 5,445 cfs for October, 4,756 cfs for November, and 7,129 cfs for December.

If the X2 objective is required to be at or west of the Chipps Island location, dry year base Vernalis flows are set at 2,280 cfs from February to April 14 and from May 16 through June 30. The base-flow objective is relaxed to 1,420 cfs when X2 is required to be east of Chipps Island.

D-1641 requires the San Joaquin River spring pulse flow for April 15 to May 15 at Vernalis. This spring pulse flow requirement varies based on the location of X2 during April. However, the CALFED Operations Group may vary the actual timing and duration of the pulse attraction flow based on real-time monitoring data. The *Vernalis Adaptive Management Plan* (VAMP), part of the San Joaquin River Agreement and approved in D-1641, contains SWRCB-approved alternative spring pulse flow and export limits. Typically, Reclamation and DWR use this alternative in lieu of D-1641 limits.

VAMP marked its tenth year of operation in compliance with D-1641 in calendar year 2009. The 2009 VAMP target flow period was April 19 through May 19, however the “Sequential Dry-Year Relaxation” condition was triggered, meaning that no VAMP target flow would be defined and no supplemental

water for river flows was provided. The implementation phase of the VAMP hydrologic operation consisted mainly of monitoring flow conditions during the VAMP period and making modifications to the daily operation plan. For more information about 2009 VAMP activities, see Chapter 3, Environmental Programs.

Additional information about San Joaquin River water quality can be found in Chapter 5, Local Assistance.

Export Standards

D-1641 includes an export limitation for the SWP and CVP. It limits Delta exports to a ratio of Delta inflow to combined water project exports and is expressed as a maximum export rate in percentage of Delta inflow. The maximum percentage of Delta inflow diverted varies by month; for example, in February, it is conditioned by the previous month’s Eight River Index. During the San Joaquin River spring pulse flow season, VAMP export rates are typically used as an alternative to the D-1641 spring export limitation, and the CALFED Operations Group may impose additional export restrictions.

The actual export amount is calculated using the 3-day average that combines the inflow rate for Clifton Court Forebay (excluding Byron-Bethany Irrigation District diversions from Clifton Court Forebay) added to the Jones Pumping Plant diversion. The export-to-inflow ratio limit is reported as either a 3-day or 14-day running average. A 14-day running average of inflows is used unless storage withdrawals from upstream reservoirs are being made for export, in which case a 3-day average of inflows is used. In all water year types, the maximum combined export rate from February through June is 35 percent of Delta inflow. This rate may be relaxed in February during years with less precipitation to between 35 and 45 percent. From July through January, the export-to-inflow ratio rises to 65 percent.

During 2009, the Delta was in excess conditions or balanced conditions without storage withdrawal from January 1 to May 30, totaling an accumulated 150 days. For the same period, combined SWP and CVP exports averaged about 23 percent of Delta inflow, meeting the 65 percent limitation in January and 35 percent limitation from February to May.

The Delta was in balanced conditions with storage withdrawal from May 31 to December 31, totaling 185 days. Within this period, combined SWP and CVP exports averaged about 42 percent of Delta inflow, meeting the 35 percent limitation in June and 65 percent limitation from July to December.

South Delta Temporary Barriers

The South Delta Temporary Barriers Project, initiated as a test project in 1991, was extended for 5 years in 1996, and extended again for 7 years in 2001. The project was created partially in response to a 1982 lawsuit filed by the South Delta Water Agency over a dispute about water level impacts by the SWP and consists of four rock barriers across South Delta channels.

These temporary seasonal barriers are designed to improve local water levels and circulation patterns, protect fishery resources, and improve water quality. They are placed across Middle River, Old River near Tracy, Grant Line Canal, and at Head of Old River.

The barrier placed at Head of Old River in the fall helps keep upstream migrating adult salmon from straying out of the San Joaquin River into interior Delta channels and can help improve dissolved oxygen (DO) conditions in the Stockton Deep Water Ship Channel (DWSC).

For more information about the temporary barriers, see Chapter 2, Delta Resources, and Chapter 3, Environmental Programs.

Special Study and Biological Surveys

DWR conducts several special studies and biological surveys each year. This includes a special study in the Stockton DWSC during the late summer and early fall to monitor the occurrence of low DO levels. Low DO levels potentially cause physiological stress to fish and block the migration of salmon into the San Joaquin River. DWR also conducts biological surveys of benthic organism density and diversity and of phytoplankton biomass and community composition in the Sacramento-San Joaquin Delta, Suisun Bay, and San Pablo Bay.

Fall Dissolved Oxygen Study in the Stockton DWSC

Historically, during the late summer and early fall, DO levels in the eastern and central portions of the Stockton DWSC have dropped below both the 5.0 mg/L and 6.0 mg/L water quality objectives set by SWRCB and the RWQCB, respectively. These low DO levels are a result of several factors, including low San Joaquin River inflows, warm water temperatures, high biochemical oxygen demand, reduced tidal circulation, and intermittent reverse flow conditions in the San Joaquin River at Stockton.

To help reduce the severity of these low DO conditions, DWR normally installs a temporary rock barrier across Head of Old River during periods of projected low fall flows in the San Joaquin River. The barrier increases net flows in the San Joaquin River past Stockton by reducing the upstream diversion of flows down Old River.

In 2009, the spring rock barrier was not installed. Instead, a nonphysical “bubble barrier” was installed as a pilot test to

prevent salmon from entering Old River. (See Chapter 3, Environmental Programs.) The fall rock barrier was also not installed in 2009 because existing flows and DO levels were sufficient for salmon.

Also, 2009 marked the second year of the Port of Stockton aeration demonstration project. The aeration facility was undergoing operational testing, which included injecting oxygen intermittently throughout the DO monitoring study period. The aeration facility was located on Rough and Ready Island near station 11. For more information about this project, visit DWR's website.

Methods

Monitoring DO concentration in the Stockton DWSC was conducted by boat on 12 monitoring runs, from June 5 to November 18, 2009. During each run, 14 sites were sampled at low water slack tide from Prisoners Point in the Central Delta to the Stockton Turning Basin at the terminus of the ship channel. Because monitoring results differ within the channel, sampling stations were grouped into western, central, and eastern regions. The western channel begins at Prisoners Point and ends at Columbia Cut. The central channel begins one-half mile east of Columbia Cut and ends at Fourteen Mile Slough. Finally, the eastern channel begins at Buckley Cove and ends at Rough and Ready Island. The turning basin is unique within the channel because it is east of the entry point of the San Joaquin River into the channel and isolated from down-channel flows.

Results

During the period of this study (June 5 to November 18), DO levels varied between regions within the channel (not including the turning basin). Overall study period range was 5.3 to 9 mg/L at the surface and 3.6 to 9.6 mg/L at the bottom. In the western channel, DO concentrations were relatively high and stable, ranging from 6.7 to

8.9 mg/L at the surface and 6.8 to 9.2 mg/L at the bottom. In the central channel, DO concentrations were variable, ranging from 5.5 to 8.9 mg/L at the surface and 5.3 to 9.1 mg/L at the bottom. In the eastern channel, DO levels were slightly lower and tended to be more stratified than the other regions, ranging from 5.3 to 9.6 mg/L at the surface and 3.6 to 9.6 mg/L at the bottom.

DO concentrations in the Stockton DWSC fell below both the State's 5.0 mg/L and 6.0 mg/L objectives on four monitoring runs: July 6 (station 13), July 20 (station 12), September 2 (stations 8 through 13), and September 18 (stations 8 through 11). All sites were above State DO objectives on subsequent sampling runs.

Higher San Joaquin River inflows, as well as the absence of intermittent reverse flows near Stockton, coincided with improved DO conditions. Further monitoring operations for the fall 2009 special study were suspended after November 18, 2009.

Benthic Survey

The benthic monitoring program documents changes in the composition, abundance, density, and distribution of the benthic biota within the upper San Francisco Estuary. Benthic biota are relatively long-lived and can respond to changes in physical factors within the estuary, such as fresh water inflows, salinity, and substrate composition. As a result, benthic data can provide an indication of physical changes occurring within the upper estuary. Because the operation of the SWP can impact flow characteristics of the estuary, and subsequently influence the density and distribution of benthic biota, benthic monitoring is an important biological survey conducted by DWR. In addition, benthic monitoring data are also used to detect and document the presence of newly introduced species within the upper estuary.

Benthic monitoring was conducted at 10 sampling sites distributed throughout the major habitat types within the estuary:

- Clifton Court Forebay Intake;
- San Joaquin River at Buckley Cove;
- San Joaquin River at Twitchell Island;
- Old River opposite Rancho del Rio;
- Sacramento River below the Rio Vista Bridge;
- Sacramento River above Point Sacramento;
- Suisun Bay at Bulls Head Point;
- Grizzly Bay at Dolphin near Suisun Slough;
- San Pablo Bay near Pinole Point; and
- San Pablo Bay near the mouth of the Petaluma River.

Four bottom grab samples for benthic analysis and one sample for sediment analysis were collected monthly at each site during 2009. Samples were analyzed to identify organisms to the lowest possible identifiable taxon and to count all organisms collected.

DWR maintains a database of benthic organisms located within the upper estuary. The benthic database is dynamic and regularly undergoes peer review and update. When a new organism is identified at any of the sampling stations it is added to the database. In addition, the taxonomic names of organisms on the list are updated when sufficient evidence is produced to warrant such changes.

A total of 177 species of benthic macrofauna were collected in 2009 at the 10 sampling sites. Of the 177 species, the following 10 dominant species represented 80.8 percent of all organisms collected:

- amphipods: *Ampelisca abdita*, *Americorophium spinicorne*,

Americorophium stimpsoni, *Corophium alienense*, and *Gammarus daiberi*;

- Sabellidae polychaete: *Manayunkia speciosa*;
- Tubificidae worms: *Limnodrilus hoffmeisteri* and *Varichaetadrilus angustipenis*; and
- Asian clams: *Corbula amurensis* and *Corbicula fluminea*.

Of the 10 dominant species, *Corbula amurensis* and *Ampelisca abdita* represent macrofauna that inhabit a typically high saline environment and were found in San Pablo Bay, Suisun Bay, and Grizzly Bay. *Corophium alienense*, *Americorophium stimpsoni*, and *Americorophium spinicorne* tolerate a wider range of salinity. They were collected both in the higher saline western sites and the more brackish to fresh water eastern sites such as the San Joaquin River at Twitchell Island and the Sacramento River above Point Sacramento. The remaining five species, *Gammarus daiberi*, *Manayunkia speciosa*, *Limnodrilus hoffmeisteri*, *Varichaetadrilus angustipenis*, and *Corbicula fluminea* are predominantly fresh water species and were collected at sites east of Suisun Bay.

Phytoplankton and Chlorophyll *a* Survey

Phytoplankton are small, free-floating or attached algae that can be tiny, single-celled organisms (less than 5 micrometers in diameter) or larger colonial organisms. Phytoplankton are an important source of food in the estuary for zooplankton, invertebrates, and some species of fish. Phytoplankton biomass is an indicator of the status of primary productivity in the estuary. Chlorophyll *a* is one of the main groups of pigments contained in the algal species that make up phytoplankton.

Monthly sampling of chlorophyll *a* concentrations and phytoplankton was conducted in 2009 by DWR's Bay-Delta

Monitoring Branch at 13 stations throughout the upper San Francisco Estuary:

- Sacramento River at Greene's Landing/Hood and above Point Sacramento;
- San Joaquin River at Vernalis, Buckley Cove, and Potato Point;
- Old River opposite Rancho del Rio;
- Disappointment Slough near Bishop Cut;
- Frank's Tract near Russo's Landing;
- Suisun Bay at Bulls Head Point near Martinez and off Middle Point near Nichols;
- Grizzly Bay at Dolphin near Suisun Slough; and
- San Pablo Bay near Pinole Point and near the mouth of the Petaluma River.

Chlorophyll *a* concentration was measured at the 13 monitoring stations to estimate overall phytoplankton biomass in the estuary. Phytoplankton samples were collected and analyzed separately to determine which species were present in the estuary.

Monthly chlorophyll *a* concentrations throughout much of the estuary were relatively low when compared to historical data. Of the 156 samples taken in 2009, 93.5 percent had chlorophyll *a* levels below 10 micrograms per liter ($\mu\text{g/L}$). Chlorophyll *a* levels below 10 $\mu\text{g/L}$ are considered limiting for zooplankton growth. The mean chlorophyll *a* concentration for all samples in 2009 was 5.38 $\mu\text{g/L}$, and the median value was 1.72 $\mu\text{g/L}$. In comparison, during 2008, mean chlorophyll *a* concentrations were higher, with a mean of 6.52 $\mu\text{g/L}$ and a median of 2.19 $\mu\text{g/L}$. The maximum chlorophyll *a* concentration in 2009 was 260.59 $\mu\text{g/L}$, recorded in June at the San Joaquin River at Vernalis. This maximum was higher than the 2008 peak of 226.42 $\mu\text{g/L}$. The minimum chlorophyll *a* concentration in 2009 was 0.47 $\mu\text{g/L}$, recorded in January at the Sacramento River at Hood station.

There were 10 samples with chlorophyll *a* levels above 10 $\mu\text{g/L}$. Of those, all 10 were from the San Joaquin River near Vernalis.

Phytoplankton biomass and resulting chlorophyll *a* concentrations in some areas of the estuary may be influenced by extensive filtration of the water column by the introduced Asian clam, *Corbula amurensis*. Well-established benthic populations of *C. amurensis* in Suisun and San Pablo bays are thought to have contributed to the low chlorophyll *a* concentrations (and increased water clarity) measured in these westerly bays since the mid-1980s.

In addition to monitoring for chlorophyll *a*, water samples were analyzed for pheophytin.

Pheophytin *a* is a primary degradation product of chlorophyll *a*, and its relative concentration is useful for estimating the general physiological state of phytoplankton populations. When phytoplankton are actively growing, the concentrations of pheophytin are normally expected to be low in relation to chlorophyll *a*. The mean pheophytin *a* concentration for all samples in 2009 was 1.59 $\mu\text{g/L}$, and the median value was 0.94 $\mu\text{g/L}$. The maximum pheophytin *a* concentration was 24.99 $\mu\text{g/L}$, recorded at the San Joaquin River near Vernalis monitoring station in June. The minimum pheophytin *a* concentration was 0.07 $\mu\text{g/L}$, recorded at San Pablo Bay near the mouth of the Petaluma River in January.

Phytoplankton populations consisted of these categories (in order of abundance):

- centric diatoms (class Coscinodiscophyceae);
- cyanobacteria (class Cyanophyceae);
- pennate diatoms (classes Bacillariophyceae and Fragilariophyceae);
- green algae (classes Chlorophyceae, Ulvophyceae, and Zygnematophyceae);

- cryptomonad flagellates (class Cryptophyceae);
- euglenoid flagellates (class Euglenophyceae);
- unknown taxa;
- dinoflagellates (class Dinophyceae);
- silicoflagellates (class Dictyochophyceae);
- ciliates (classes Kinetofragminophora and Spirotrichea);
- red algae (class Bangiophyceae);
- chrysophyte flagellates (class Chrysophyceae);
- nanoflagellates;
- haptophyte flagellates (class Haptophyceae); and
- xanthophyte flagellates (class Xanthophyceae).

Of the genera identified, the following were the 10 most common, in order of abundance:

- *Cyclotella* (centric diatom; class Coscinodiscophyceae);
- *Oscillatoria* (cyanobacterium; class Cyanophyceae);
- *Fragilaria* (pennate diatom; class Fragilariophyceae);
- *Phormidium* (cyanobacterium; class Cyanophyceae);
- *Nitzschia* (pennate diatom; class Bacillariophyceae);
- *Actinastrum* (green alga; class Chlorophyceae);
- *Chlorococcum* (green alga; class Chlorophyceae);
- *Scenedesmus* (green alga; class Chlorophyceae);
- *Trachelomonas* (euglenoid flagellate; class Euglenophyceae); and
- *Melosira* (centric diatom; class Coscinodiscophyceae).

Activities Outside the Delta

Routine SWP water quality monitoring activities, as well as special studies, are

conducted outside the Delta. The special studies are in response to increasingly stringent regulations facing water purveyors who rely on DWR to deliver high-quality raw water. Most of these special studies were initiated because of fish and wildlife and water quality concerns held by agencies that provide domestic water service.

Water Quality Monitoring in the SWP

The Division of Operations and Maintenance monitors water quality throughout the SWP. The SWP water quality monitoring program includes the analysis of more than 200 different chemical, biological, and physical constituents at more than 40 stations. The stations are located at SWP storage and conveyance facilities around the State from the Feather River watershed in the north to Lake Perris in the south. Facilities include the Oroville Facilities, California Aqueduct with the East and West Branches, North Bay Aqueduct, South Bay Aqueduct, and the San Luis Joint-Use Complex. Water quality sampling frequency is monthly at most stations, but can vary from weekly to annually depending on location, time of year, or special events. Water samples are delivered to DWR's Bryce Chemical Laboratory in West Sacramento for processing and analysis of water quality constituents. Constituents analyzed can include dissolved solids; nutrients; trace metals; herbicides; pesticides; organic substances; phytoplankton, and minerals such as chloride, sulfate, and sodium. The SWP water quality grab sampling locations and schedule can be found on the Division of Operations and Maintenance SWP water quality webpage on DWR's website.

The SWP water quality monitoring program also includes the operation of 16 automated monitoring stations at key locations along the SWP. This network of automated stations continuously monitors a variety of physico-chemical parameters such as conductivity,

turbidity, pH, UV₂₅₄ (254 nanometer ultraviolet absorbance; measures dissolved organic carbon), and fluorometry, providing real-time data essential for SWP water contractors that provide drinking water. More automated station information can be found on DWR's website.

The SWP water quality monitoring program is an important operational component of the SWP. The data generated are used to assess spatial changes, short- and long-term trends, impacts from emergencies (e.g., spills and pipe ruptures), the influence of operations and hydrology, and the general suitability of SWP water for drinking water purposes as defined by public health protection standards. The data are periodically assessed and disseminated through a variety of media including memos, network postings, conference calls, and email distributions. Special studies are also periodically conducted to investigate the impacts of specific incidents affecting SWP water quality, such as groundwater turn-ins, floodwater inflows, hydrology, and Delta hydrodynamics. Selected published reports are available on DWR's website.

Table 4-1 shows mean water quality during 2009 for several stations around the SWP and one station on the CVP's Delta Mendota Canal. Water quality in the Oroville Facilities was excellent, with nondetectable to low levels of minerals, nutrients, and most minor elements. This station is directly influenced by releases from Lake Oroville and the high-quality water flowing into the reservoir from the Feather River watershed. Further downstream in the California Aqueduct, total dissolved solids (a physical measure of salinity) averaged from 264 to 313 mg/L at multiple stations. These concentrations were higher than normal due, in part, to reduced water supply availability resulting from a dry water year in both the Sacramento and San Joaquin valleys. Salinity (and associated minerals) in export water in the California Aqueduct is directly

related to the volume of fresh water flowing into the Sacramento-San Joaquin Delta via Central Valley waterways. Another influence on aqueduct water quality during 2009 was groundwater turn-ins. This influence is reflected in Table 4-1 as observed changes in mean arsenic, nitrate+nitrite, bromide, total phosphorus, organic carbon, and salinity (with its associated minerals) between Checks 21 and 29 (where most water turn-ins occurred in 2009). Groundwater turn-ins to the California Aqueduct are discussed in more detail below.

Sampling for pesticides, herbicides, and other organic compounds is conducted in March, June, and September at several stations around the SWP. During 2009, the herbicide simazine was detected throughout the SWP and the CVP's Delta Mendota Canal in June at concentrations ranging from 0.02 to 0.06 µg/L (Table 4-2). These concentrations were well below the drinking water maximum contaminant level of 4 µg/L. Another herbicide, diuron, was detected in March at Checks 21, 29, and 41 with concentrations ranging from 0.56 to 1.65 µg/L. Concentrations of the herbicide metolachlor ranged from 0.1 to 0.2 µg/L at three stations during June. No maximum contaminant levels have been set for diuron or metolachlor. Additional SWP water quality data are available electronically from DWR's website.

Groundwater Turn-ins

Groundwater turn-ins to the California Aqueduct are permitted with DWR approval. Participants of an approved program can use aqueduct capacity to move groundwater (and sometimes available water from other sources) from a point of availability to a point of need. SWP contractors who bank groundwater also convey water in the aqueduct at various locations. Turn-in water may be used for local redistribution, transfer to other water contractors, or exchange with the Environmental Water Account. Turn-ins

Table 4-1 Mean Water Quality at Selected SWP Grab Sample Locations, 2009

| California Aqueduct | | | | | | | | | | | | |
|---------------------------|---------------------------|-----------------|---|----------------------|-------------------------|---------------------|-----------------------------------|---------------------------|----------------------------|-------------------------------|------------------------|--|
| Constituent | Units ^a | Reporting Limit | North Bay Aqueduct, Barker Slough Pumping Plant | | Delta-Mendota Canal | Banks Pumping Plant | O'Neill Forebay Outlet (Check 13) | Kettleman City (Check 21) | Near Highway 119 Check 29) | Tehachapi Afterbay (Check 41) | Devil Canyon Headworks | |
| | | | Thermalito Afterbay at Outlet | Slough Pumping Plant | Upstream of McCabe Road | | | | | | | |
| Alkalinity | mg/L as CaCO ₃ | 1 | 42 | 101 | 79 | 74 | 81 | 80 | 71 | 76 | 75 | |
| Antimony | mg/L | 0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | NR | NR | |
| Arsenic | mg/L | 0.001 | <0.001 | 0.003 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.004 | 0.004 | |
| Beryllium | mg/L | 0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | |
| Boron | mg/L | 0.1 | <0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | |
| Bromide | mg/L | 0.01 | <0.01 | 0.04 | 0.26 | 0.25 | 0.30 | 0.31 | 0.26 | 0.25 | 0.27 | |
| Calcium | mg/L | 1 | 9 | 16 | 23 | 20 | 23 | 23 | 25 | 26 | 25 | |
| Chloride | mg/L | 1 | 1 | 23 | 81 | 77 | 93 | 97 | 76 | 73 | 76 | |
| Chromium | mg/L | 0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | 0.001 | <0.001 | |
| Copper | mg/L | 0.001 | <0.001 | 0.002 | 0.002 | 0.002 | 0.001 | 0.002 | <0.001 | 0.001 | 0.001 | |
| Fluoride | mg/L | 0.1 | <0.1 | <0.1 | NR | <0.1 | NR | NR | <0.1 | NR | NR | |
| Hardness | mg/L as CaCO ₃ | 1 | 40 | 103 | 119 | 106 | 123 | 123 | 102 | 106 | 103 | |
| Iron | mg/L | 0.005 | 0.006 | 0.059 | 0.016 | 0.026 | 0.014 | <0.005 | <0.005 | <0.005 | <0.005 | |
| Lead | mg/L | 0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | |
| Magnesium | mg/L | 1 | 4 | 15 | 15 | 14 | 16 | 16 | 9 | 10 | 10 | |
| Manganese | mg/L | 0.005 | <0.005 | 0.035 | <0.005 | 0.019 | <0.005 | <0.005 | 0.014 | <0.005 | 0.006 | |
| Nitrite + Nitrate | mg/L as N | 0.01 | <0.01 | 0.23 | 0.41 | 0.53 | 0.63 | 0.48 | 0.79 | 0.90 | 0.52 | |
| Organic Carbon, Dissolved | mg/L as C | 0.5 | NR | 7.0 | 3.5 | 3.7 | 3.5 | 3.2 | 2.5 | 2.2 | 2.5 | |
| Organic Carbon, Total | mg/L as C | 0.5 | NR | 7.6 | 3.7 | 3.9 | 3.7 | 3.4 | 2.5 | 2.4 | 2.7 | |
| Phosphate-Ortho | mg/L as P | 0.01 | <0.01 | 0.15 | 0.06 | 0.07 | 0.07 | 0.06 | NR | 0.04 | 0.04 | |
| Phosphorus-Total | mg/L | 0.01 | 0.02 | 0.25 | 0.09 | 0.09 | 0.08 | 0.08 | 0.05 | 0.06 | 0.06 | |
| Selenium | mg/L | 0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | |
| Sodium | mg/L | 1 | 4 | 29 | 58 | 53 | 64 | 66 | 59 | 59 | 58 | |
| Specific Conductance | µS/cm | 1 | 92 | 322 | 525 | 463 | 559 | 561 | 478 | 483 | 486 | |
| Sulfate | mg/L | 1 | 2 | 23 | 47 | 35 | 44 | 44 | 41 | 47 | 42 | |
| Total Dissolved Solids | mg/L | 1 | 56 | 187 | 295 | 264 | 313 | 312 | 272 | 279 | 273 | |
| Turbidity | NTU | 1 | 4 | 38 | 9 | 6 | 4 | 3 | 4 | 4 | 2 | |
| Zinc | mg/L | 0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | 0.005 | <0.005 | |

^a mg/L = milligrams per liter; µS/cm = microsiemens per centimeter; NTU = nephelometric turbidity unit; NR = No data recorded at this location.
NOTE: A grab sample is a single sample chosen to represent the conditions in a given matrix (usually natural water) at a specific location, depth, and time. All reported constituents are the yearly mean of laboratory analytical values sampled monthly from January through December. The yearly mean may be based upon one to twelve samples for the list of constituents.

Table 4-2 Pesticides, Herbicides, and Other Organic Substances Detected in the SWP, 2009

| Sampling Location ^a | Sampling Station ID Number | Sample Date | Chemical Detected ^b | Concentration (µg/L) ^c |
|--|----------------------------|-------------|--------------------------------|-----------------------------------|
| North Bay Aqueduct, Barker Slough Pumping Plant | KG000000 | 6/19/09 | Metolachlor | 0.1 |
| Delta-Mendota Canal upstream of McCabe Road | DMC06716 | 6/17/09 | Metolachlor | 0.2 |
| | | | Simazine | 0.02 |
| Banks Pumping Plant | KA000331 | 6/16/09 | Metolachlor | 0.2 |
| | | | Simazine | 0.02 |
| O'Neill Forebay Outlet (California Aqueduct at Check 13) | KA007089 | 6/17/09 | Simazine | 0.02 |
| California Aqueduct near Kettleman City (Check 21) | KA017226 | 3/17/09 | Diuron | 0.68 |
| | | 6/16/09 | Simazine | 0.02 |
| California Aqueduct near Highway 119 (Check 29) | KA024454 | 3/17/09 | Diuron | 0.56 |
| | | 6/17/09 | Simazine | 0.02 |
| California Aqueduct at Tehachapi Afterbay (Check 41) | KA030341 | 3/18/09 | Diuron | 1.65 |
| California Aqueduct at Devil Canyon Headworks | KA041134 | 6/17/09 | Simazine | 0.06 |

^a Water at these locations was sampled during March, June, and September.

^b Only chemicals found in detectable amounts at the sampling stations are included in this table. Refer to the document entitled *Analytical Methods for Organic Chemicals* for a complete listing of all organic chemicals included in the laboratory analysis. This document is available online on DWR's website.

^c µg/L = micrograms per liter.

are allowed provided they do not result in the degradation of SWP water quality, cause toxicity to fish and wildlife, or adversely affect beneficial uses.

In 2001, DWR established interim criteria to review the water quality of proposed turn-ins using a two-tiered approach. Tier 1 programs have criteria requiring "no adverse impacts" on SWP water based on historical water quality levels in the aqueduct. Programs meeting Tier 1 criteria are generally approved by DWR without referral to the SWP water contractor Facilitation Group. Tier 2 programs are implemented when turn-in water quality exceeds historical aqueduct levels and has the potential to cause adverse impacts. Tier 2 programs are referred to the SWP water contractor Facilitation Group for review and response to DWR. DWR considers all factors before making a decision on any proposed turn-in request.

During 2009, approximately 440,775 acre-feet (af) of groundwater was admitted to the California Aqueduct. Participating turn-in agencies included the Kern Water Bank Authority (14,134 af), Semitropic Water Storage District (76,468 af), Kern County Water Agency (294,894 af), Arvin-Edison Water Storage District (54,948 af), and San Luis Water District (331 af). The majority of the turn-ins (85 percent) were admitted to the aqueduct between Checks 21 and 29 and composed between 6 and 87 percent of the volume of water sent south (at Buena Vista Pumping Plant). Percentages were highest during January through April, November, and December, ranging from 46 to 87 percent, and were lowest during June through October ranging from 6 to 33 percent. As discussed (see water quality discussion above and Table 4-1), turn-ins affect the concentration of certain organic and inorganic minerals in the aqueduct.

Municipal Water Quality Program Branch

The Sacramento-San Joaquin Delta provides drinking water for more than 25 million people in California. The Division of Environmental Services, Municipal Water Quality Program (MWQP) is responsible for evaluating the suitability of Delta water as a drinking water source, and identifying sources of water quality degradation. The MWQP Branch includes the Municipal Water Quality Investigations (MWQI), Real-time Data and Forecasting Comprehensive Program, Water Quality Special Studies, Field Support, and Quality Assurance/Quality Control (QA/QC) sections.

The MWQP is responsible for monitoring and evaluating drinking water quality constituents of concern in source waters. The mission of the MWQI Program is to:

- support the effective and efficient use of the SWP as a source water supply used for municipal purposes through monitoring, forecasting, and reporting SWP water quality;
- provide early warning of changing conditions in source water quality used for municipal purposes;
- provide data and knowledge-based support for operational decision-making on the SWP;
- conduct scientific studies of importance to drinking water; and
- provide scientific support to DWR, the State Water Project Contractors Authority-MWQI Specific Project Committee, CALFED, and other governmental entities.

Real Time Data and Forecasting Comprehensive Program

The Real Time Data and Forecasting Comprehensive Program (RTDF-CP) has become a central element of the MWQP.

The goal of the program is to develop the capability for real-time data and forecasting of short- and long-term source drinking water quality conditions in the Delta and SWP. Within the MWQP, the RTDF-CP entails the following elements:

- organizational coordination and collaboration between DWR's monitoring and forecasting groups;
- real-time data acquisition for the Delta and SWP through monitoring;
- enhancement of forecasting and fingerprinting of drinking water quality through use of computer models;
- centralized information management and dissemination;
- scientific support studies;
- emergency response preparedness as related to drinking water quality; and
- organizational coordination and collaboration with outside agencies to enhance real-time monitoring activities.

The real-time monitoring network now includes stations located at Banks Pumping Plant, Jones Pumping Plant (a new station became active in January 2009), the Sacramento River at Hood, and the San Joaquin River near Vernalis (McCune Station). MWQP will also be evaluating the feasibility of adding a fifth station at the Gianelli Pumping-Generating Plant at San Luis Reservoir.

In December 2009, the RTDF-CP reached an important goal, publishing daily web-based summaries of water quality and flow at key locations in the Delta.

In 2009, the RTDF-CP supported development of the Delta Simulation Model 2 (DSM2) Aqueduct Extension Model of the SWP and began sampling in support of the Watershed Analysis Risk Management Framework (WARMF) watershed models that will feed into the DSM2 Delta model.

Quality Assurance/Quality Control

The QA/QC Program was established by Water Resources Engineering Memorandum No. 60 in 1992 to ensure that data generated by DWR's environmental monitoring programs meet high quality standards and are scientifically defensible. This is accomplished by encouraging monitoring programs to follow standardized procedures including quality control measurements in their sampling protocols.

The program performs the following functions:

- procures specialized products and services from outside sources on an as-needed basis, which may include obtaining certified laboratory standards and outside instructors for teaching technical classes;
- publishes QA/QC guidance documents;
- develops and maintains the drinking water quality database and associated quality control metadata as part of the DWR Water Data Library; and
- assists departmental programs with developing quality assurance project plans.

In 2009, QA/QC program staff evaluated a novel statistical method for analyzing water quality data and compared the results with standard statistical methods. The results were published in the *Journal of Environmental Monitoring*.

With assistance from California State University, the QA/QC program presented two classes in 2009. The first class, "Applied Environmental Statistics," was held May 7, through May 11. The class provided training on up-to-date methods for analyzing environmental data. The second class, "Nondetects and Data Analysis," was held December 2 and 3, 2009. Nondetects are data a laboratory reports as being below the detection or reporting limit. Nondetects

should not be treated as zeros in statistical analysis, and the class provided specialized procedures for dealing with such data.

Quality Assurance Project Plan for Real-time, Continuous Monitoring of Bromide and Nutrients at Banks Pumping Plant and San Joaquin River near Vernalis.

The primary objective of this project is to determine the feasibility of establishing field stations for the continuous monitoring of surface water anion levels. The major tasks of the project are to:

- evaluate current analytical methods and instruments for anion analysis;
- install and operate anion analyzers at key field locations;
- evaluate the accuracy of the data generated by the field instruments;
- evaluate and install a data telemetry system to provide real-time access to anion data and allow for remote operation of the analyzers; and
- determine if long-term operation of these analyzers is logistically feasible.

Water Quality Special Studies

Special studies are conducted to investigate the origins, fate, and transport, and in some cases, loads of current and emerging contaminants of concern. Such studies help determine where new instruments should be located. Special studies can also be used to:

- investigate seasonal patterns and trends of constituents or examine circulation patterns of contaminants;
- refine modeling assumptions; and
- assess the impacts of increasing urbanization on levels of water quality constituents of concern.

MWQI engages in special studies that focus on specific aspects of source waters, contaminant loading, measurement methods and instrumentation, and climate and

hydrology. The following studies were in progress for the MWQI Program 2008–2009 Work Plan:

- Urban Sources and Loads Investigation;
- Sources, Fate, and Transport of Nitrosamines and their Precursors in the Sacramento-San Joaquin Delta and the State Water Project;
- Investigation of O'Neill Forebay Water Circulation; and
- Investigation of constituent dispersion and travel time in the SWP.

In 2004, the MWQP, in partnership with the Dry Creek Conservancy, received Proposition 13 and CALFED grant funding to assess water quality and loads of parameters of concern from an urban drainage in metropolitan Sacramento. MWQP's sampling efforts focused on the Natomas East Main Drainage Canal (also known as Steelhead Creek), which receives water from one of the fastest developing regions in the State. Analysis of loading data found that the carbon load from Steelhead Creek represented as little as 3 percent of the carbon in the Sacramento River during the dry season and up to 93 percent of the river load during the wet season. Together with an analysis of loading from the Sacramento Regional Water Treatment Plant, the data indicate that urban runoff and wastewater discharges have a substantial impact on the Sacramento River at Hood and may have been underestimated in previous synoptic estimates of urban loading.

A portion of this study was published in collaboration with University of California, Riverside, in the American Geophysical Union's journal, *Water Resources Research*.

The study report and other MWQP publications can be found on DWR's website.

Bryte Chemical Laboratory

Established in 1951, Bryte Chemical Laboratory is DWR's primary analytical laboratory. Its main function is to analyze drinking, surface, and waste water and groundwater, for the various water quality programs within DWR. Since 1990, the laboratory has been certified biannually by the DPH Environmental Laboratory Accreditation Program to perform water quality analyses following U.S. Environmental Protection Agency (EPA) or American Water Works Association procedures and analytical methods. This certification allows the laboratory to perform analyses for regulatory work that can be used for compliance purposes. The laboratory continues to perform the vast majority of chemical and other related analyses required to support DWR's water quality programs. Every year, thousands of water samples are routinely analyzed for inorganic and organic constituents such as standard minerals, cations, anions, nutrients, metals, chlorophyll, pesticides, herbicides, and volatile organic compounds.

In 2009, the laboratory upgraded its capability and capacity to detect and analyze low-level total mercury by EPA Method 1631 E with the purchase of an Analytik Jena mercur analyzer (spectrophotometer). This spectrophotometer is a fully automated and computer-controlled instrument system equipped with a new technologically advanced double mirrored quartz fluorescence cell that generates data that are highly stable, accurate, and reproducible. The instrument's detection limit has been established at 0.5 parts per trillion.

The laboratory has continued to manage a variety of analytical contracts with other State agencies and several outside laboratories in accordance with the master contract policy approved in fiscal year 1994–1995. These contracts are used to perform analyses that are beyond the capability and

capacity of the laboratory, such as solids and fish tissues. The laboratory works in conjunction with the DWR MWQP QA/QC Section to replace these contracts as they expire each fiscal year. On July 1, 2009, WECK Laboratory was awarded the contract for soil analysis worth \$1.5 million over 3 years.

SWP security and protection has continued to be a primary goal for DWR since September 11, 2001. To help protect the SWP from biochemical and chemical agents, the laboratory continues to be an active member in a group of laboratories called the California Association of Mutual Aid Laboratories Network (CAMAL Net) headed by DPH. The laboratory network's objective is to voluntarily assist DPH in the analysis of chemical agents in water quality samples should a natural disaster or biochemical or chemical event occur in California. Assistance is only required should the analytical capacity of DPH be exceeded or to confirm the presence or absence of chemical agents in water quality samples provided by DPH. In 2007, Bryte Chemical Laboratory was classified as a Level II participating laboratory in the CAMAL Net organization. Level II only allows the laboratory to receive samples that are prescreened and determined nonhazardous to laboratory personnel.

Suisun Marsh Activities

Suisun Marsh consists of approximately 59,000 acres of tidal and managed brackish water wetlands and 30,000 acres of bays and sloughs. It is the largest contiguous brackish marsh remaining in the United States.

Situated in southern Solano County, west of the Sacramento-San Joaquin Delta and north of Suisun Bay, the marsh encompasses more than 10 percent of California's remaining natural wetlands. In addition, the marsh is the resting and feeding ground for thousands of waterfowl and shorebirds migrating on the Pacific Flyway.

Since the early 1970s, the Legislature, SWRCB, Reclamation, DFW, Suisun Resource Conservation District (SRCD), DWR, and other agencies have focused on preserving the Suisun Marsh as a unique environmental resource. Figure 4-2 shows the water quality monitoring and compliance sampling locations and the water management facilities in Suisun Bay and Marsh.

Blacklock Tidal Marsh Restoration Project

DWR received CALFED Ecosystem Restoration Program grant funds in 2001 to acquire 70 acres of what is referred to as the Blacklock property in December 2003. DWR, in cooperation with Reclamation, DFW, USFWS, and SRCD, implemented the Blacklock Restoration Project (location shown on Figure 4-2). This project restored diked, managed wetlands to tidal wetlands. In July 2006, a natural breach in the levee occurred. It was determined that the planned breach should still be constructed to allow for full tidal flow and optimum sediment transportation. The planned breach construction occurred on October 3 and 4, 2006.

The project goals and objectives are to: (1) restore the area to a fully functioning, self-sustaining marsh ecosystem created through restoration of natural hydrologic, sedimentation, and biological processes; (2) increase the area and contiguity of emergent wetlands providing habitat for tidal marsh species; and (3) assist in the recovery of at-risk species. The final restoration plan for the project was published in June 2007.

In 2009, DWR continued with implementation of the 10-year monitoring program at the Blacklock site. Monitoring is performed in cooperation with State and federal agencies. There are 15 parameters being monitored, including sediment accretion, channel network evolution, vegetation development, water quality, methyl mercury, and avian use.

For more information about the Blacklock Restoration Project, visit the Suisun Marsh Program webpage on DWR's website.

Revised Suisun Marsh Preservation Agreement

In 1987, DWR, Reclamation, DFW, and SRCD signed the *Suisun Marsh Preservation Agreement* (SMPA). SMPA contains provisions to control channel water and soil salinity to mitigate impacts of the SWP, CVP, and other upstream diverters on managed wetlands in Suisun Marsh. A revised SMPA and *Revised Mitigation and Monitoring Agreement* were signed in 2005 to make channel water salinity requirements consistent with D-1641 and replace additional large-scale water management facilities with landowner water and management activities to meet the SMPA objectives in the western marsh.

The Revised SMPA includes the following actions: operate the initial facilities and Suisun Marsh Salinity Control Gates; meet channel water salinity standards consistent with D-1641; implement a water manager program; provide portable pumps; update Individual Ownership Adaptive Management Habitat Plans; establish a drought response fund; and replace turnouts on the Roaring River Distribution System.

During 2009, DWR, DFW, Reclamation, and SRCD continued to implement these activities.

Suisun Marsh Habitat Management, Preservation, and Restoration Plan

The *Suisun Marsh Habitat Management, Preservation, and Restoration Plan* (Suisun Marsh Plan [SMP]; see sidebar) is intended to balance the benefits of tidal wetland restoration with other habitat uses in the marsh by evaluating alternatives that provide a politically acceptable change in marshwide land uses, such as salt marsh harvest mouse habitat, managed wetlands, public use, and upland habitat.

During 2009, work continued on the SMP. Representatives from the Suisun Marsh Charter Group agencies met monthly to review potential actions and develop alternatives to be included in the SMP. The "writing group," a team of staff-level representatives of some of the Principal Agencies, also met monthly to develop impact analyses for the environmental impact statement (EIS)/environmental impact report (EIR). The SMP EIS/EIR is being developed in coordination with the recommendations of the Delta Vision Process and with information and evaluation provided by the Delta Risk Management Study and other regional programmatic processes. Reclamation and USFWS have agreed to serve as joint National Environmental Policy Act lead agencies, and DFW has agreed to serve as the California Environmental Quality Act lead agency. The writing group is developing an adaptive management plan that will be an appendix to the EIS/EIR. It is anticipated a draft EIS/EIR will be available in 2012.

Operation and Maintenance Facilities

Several facilities constructed by DWR operate in the Suisun Marsh. They are identified in the *Plan of Protection for the Suisun Marsh* (1984) and the 1987 SMPA. These facilities provide lower-salinity water to managed wetlands. The initial facilities, including the Roaring River Distribution System, Morrow Island Distribution System (MIDS), and Goodyear Slough Outfall, were constructed in 1979 and 1980. The Suisun Marsh Salinity Control Gates (SMSCG) were installed and became operational in 1988. The locations of the initial facilities and the gates are shown on Figure 4-2.

Morrow Island Distribution System Fish Screen and Alternatives

MIDS is an interior ditch bordered by levees that was created to distribute water to managed wetlands. Relatively less saline

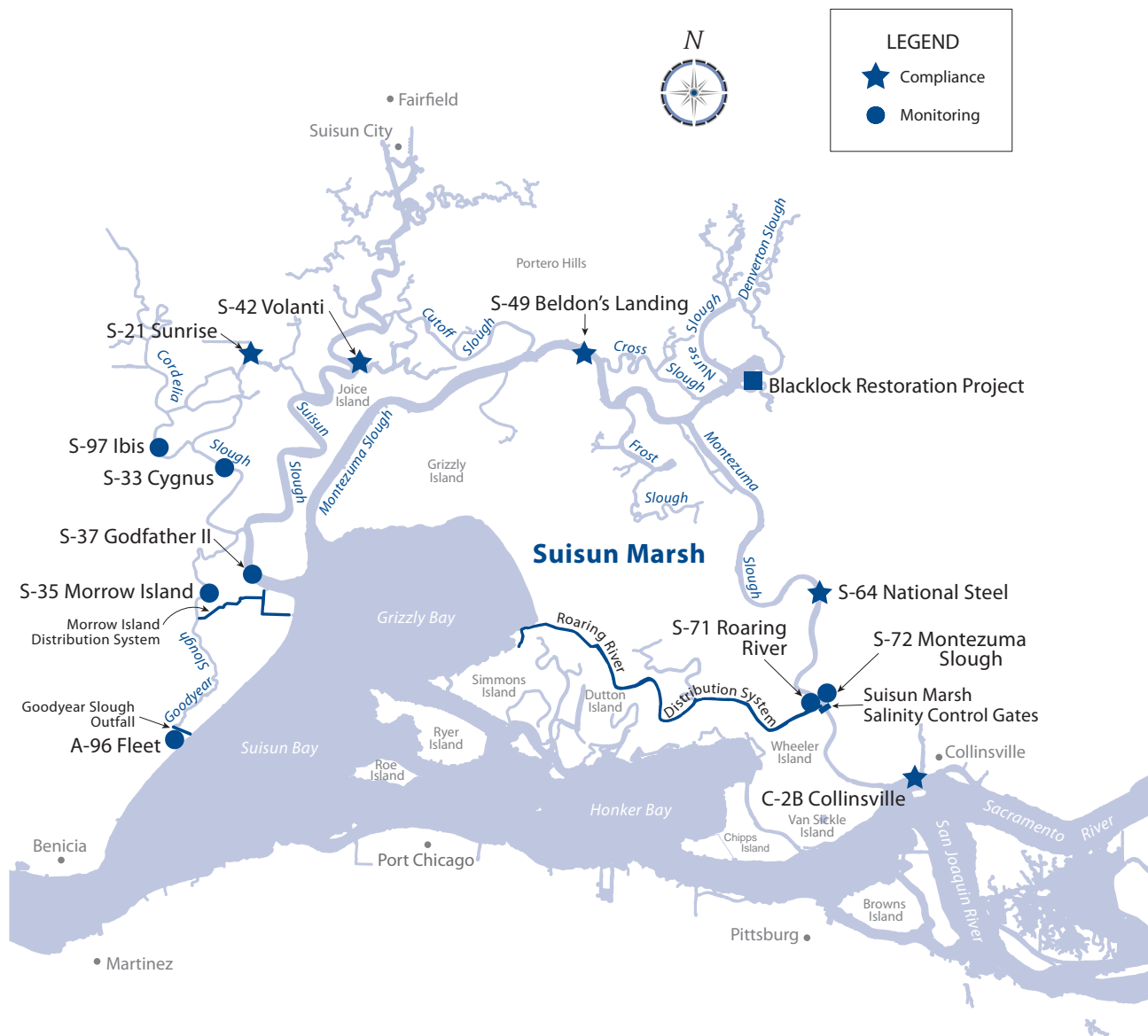


Figure 4-2 Compliance and Monitoring Stations and Water Management Facilities in the Suisun Marsh

Suisun Marsh Habitat Management, Preservation, and Restoration Plan (Suisun Marsh Plan)

In 2001, the Suisun Principal Agencies (Principal Agencies), a group of agencies with primary responsibility for Suisun Marsh management, directed the formation of a charter group to develop the Suisun Marsh Habitat Management, Preservation, and Restoration Plan, known as the Suisun Marsh Plan (SMP). The Principal Agencies are the U.S. Fish and Wildlife Service, Bureau of Reclamation, Department of Fish and Wildlife, Department of Water Resources, National Marine Fisheries Service, the Suisun Resource Conservation District, and the CALFED Bay-Delta Program (CALFED). In addition to the Principal Agencies, the charter group includes other regulatory agencies such as the U.S. Army Corps of Engineers, San Francisco Bay Conservation and Development Commission, State Water Resources Control Board, and the Regional Water Quality Control Boards.

Development of the SMP has been a multiagency, collaborative process to design a plan that will balance the goals and objectives of CALFED, the *Suisun Marsh Preservation Agreement*, and other management and restoration programs within the Suisun Marsh in a manner that is responsive to the concerns of all stakeholders and is based upon voluntary participation by private landowners. Landowners in the marsh and other agencies that have a jurisdictional or other stake in the outcome of the SMP have been engaged in the process.

Overall, the SMP is intended to balance the benefits of tidal wetland restoration with other habitat uses in the marsh by evaluating alternatives that provide for a widely acceptable change in marshwide land uses, such as salt marsh harvest mouse habitat, managed wetlands, public use, and upland habitat. The SMP will be a comprehensive plan designed to address the various stakeholder interests regarding use of marsh resources, with a focus on achieving an acceptable multistakeholder approach to the restoration of tidal wetlands and the management of wetlands and their functions. As such, the SMP is intended to be a flexible, science-based, management plan for the Suisun Marsh, consistent with the Revised SMPA and CALFED. It is also intended to set the regulatory foundation for future actions.

water is taken from Goodyear Slough in the west through water control structures that transport the water into MIDS. Water is then distributed to managed wetlands through private landowner water control structures along the ditch. Water not used by the landowners exits into Grizzly Bay through water control structures in the east. MIDS is owned by Reclamation and DWR. DWR operates and maintains this facility.

Based on previous study results, a fish screen at MIDS would likely have negligible benefits to sensitive fish populations (see Bulletin 132-07, Chapter 4, Water Quality). DWR and Reclamation are proposing to fulfill the outstanding terms and conditions of the USFWS 1997 BO for the MIDS maintenance project by acquiring and protecting, in perpetuity, aquatic habitat in Suisun Marsh. (For additional information about the BO, see Bulletin 132-08.) The status of this proposal

remains on-going without new notable developments or changes.

On February 23, 2009 DFW issued an incidental take permit for the on-going and long-term operation of the SWP existing facilities in the Sacramento-San Joaquin Delta for the protection of longfin smelt. MIDS is included as one of these facilities.

To minimize the take of longfin smelt at the MIDS diversion, DFW specifies the average intake velocities each year in order to adequately protect longfin smelt.

Also as a requirement of the incidental take permit, DWR is developing a study to confirm that the aforementioned operation prevents or substantively reduces the entrainment of longfin smelt at MIDS.

Suisun Marsh Salinity Control Gates

The SMSCG are operated as needed to meet salinity standards. When they are not in operation, they are placed in an open position to minimize fish concerns related to predation and impedance. In the past, installation or removal of the flashboards and operation of the gates has varied due to salinity conditions, fisheries agencies' requests for sensitive species concerns, or special studies and repairs.

Status of SMSCG in 2008–2009. During the 2008–2009 control season (October 2008 through May 2009), gate operations began October 2 and continued through October 14 due to salinity concerns. Between October 15 and November 23, the three radial gates were held open to balance fish concerns since salinity levels were not of concern at the time. By November 24 salinity became a concern at compliance station S-49 (Beldon's Landing), and gate operations resumed until November 29 despite the failure of gate number 1 on November 27 due to a broken cable. All three radial gates were held in a closed position for repair work between

November 30 and December 1. Thereafter, the gates were held open until December 5, at which time the gates resumed operations to control salinity and continued to operate until December 18. During that period, gate number 1 failed again on December 6 and was placed in the closed position until it was repaired on December 8. Between December 19, 2008, and January 15, 2009, all gates were held open due to low salinity levels resulting from December precipitation. Salinity became a concern again at station S-49 in mid-January, thus gate operations resumed on January 16 and continued until February 4. During that time, gate number 2 failed on January 20 due to a motor problem and was held in a closed position until it was repaired on January 30. With anticipated precipitation and salinity levels not of concern, the gates were held open between February 5 and 18. Thereafter, salinity was a concern again and gate operations resumed briefly between February 19 and 26. Between February 27 and May 19, salinity levels remained below the monthly standards, and all three gates were placed in the open position. DWR removed the flashboards on May 19, 2009.

Monitoring

Water Quality and Compliance

Salinity levels during the 2008–2009 control season were below monthly standards except for November 2008 when the D-1641 monthly standard was violated at station S-42 by 0.1 mS/cm as a result of gate failure. Deficiency period standards (defined in D-1641) continued for the Suisun Marsh during the 2008–2009 control season and will remain in effect until a subsequent water year classification is below normal, above normal, or wet. Details of salinity levels in the marsh are available in the monthly report entitled, *Suisun Marsh Monitoring Program Channel Water Salinity Report*, on DWR's website.

Suisun Marsh Expenditure History

Suisun Marsh expenditures and reimbursements administered by DWR for calendar years 1968 through 2009 are summarized in Table 4-3. From 1968 through December 31, 2009, DWR disbursed more than \$132.2 million of SWP funds for planning, design, environmental documentation, construction, maintenance, monitoring, mitigation, and permit compliance in support of implementing the Plan of Protection for the Suisun Marsh through the SMPA and for meeting standards set by SWRCB. Reclamation has reimbursed DWR approximately \$49.4 million (37 percent), and the State's General Fund has reimbursed approximately \$9.5 million (7 percent). These figures do not include up-front payments made by Reclamation for staff and other direct costs, as well as approximately \$5.7 million in Reclamation interest payments during 1988 and 1989.

Annual figures are reported in Table 4-3 for DWR's up-front payments, Reclamation reimbursements, General Fund reimbursements, and DWR's cumulative expenditure balance.

Table 4-3 Suisun Marsh Expenditures and Reimbursements Administered by DWR (in dollars), 1968–2009

| Year [1] | Reach 305 Costs [2] | General Fund Payment [3] | Adjustment for General Fund Payment ^a [4] | Reclamation Invoice Payment [5] | Interest Payment Credited Back to Contractors [6] | Net SWP Costs [2] through [6] [7] | Recreation Costs ^c [8] | SWP Water Contractors' Costs [7] minus [8] [9] |
|--------------|---------------------------|-----------------------------------|--|--|--|--|---|--|
| 1968 | 10,571 | | | | | 10,571 | 359 | 10,212 |
| 1969 | 34,181 | | | | | 34,181 | 1,162 | 33,019 |
| 1970 | 23,343 | | | | | 23,343 | 794 | 22,549 |
| 1971 | 1,042 | | | | | 1,042 | 35 | 1,007 |
| 1972 | 47 | | | | | 47 | 2 | 45 |
| 1973 | 0 | | | | | 0 | 0 | 0 |
| 1974 | 0 | | | | | 0 | 0 | 0 |
| 1975 | 2,709 | | | | | 2,709 | 92 | 2,617 |
| 1976 | 32,960 | | | | | 32,960 | 1,121 | 31,839 |
| 1977 | 37,475 | | | | | 37,475 | 1,274 | 36,201 |
| 1978 | 350,831 | | | | | 350,831 | 11,928 | 338,903 |
| 1979 | 3,660,099 | | | | | 3,660,099 | 124,618 | 3,535,481 |
| 1980 | 5,005,759 | | | | | 5,005,759 | 170,772 | 4,834,987 |
| 1981 | 2,964,974 | | | | | 2,964,974 | 101,311 | 2,863,663 |
| 1982 | 2,955,705 | | | (2,500,000) | | 455,705 | 101,111 | 354,594 |
| 1983 | 2,754,094 | | | | | 2,754,094 | 93,643 | 2,660,451 |
| 1984 | 2,418,344 | | | | | 2,418,344 | 82,388 | 2,335,956 |
| 1985 | 2,332,773 | | | | | 2,332,773 | 79,432 | 2,253,341 |
| 1986 | 6,495,322 | | | | | 6,495,322 | 220,843 | 6,274,479 |
| 1987 | 13,600,701 | | | | | 13,600,701 | 462,424 | 13,138,277 |
| 1988 | 7,456,364 | | | (17,368,725) ^b | (2,039,752) | (11,952,113) | 253,516 | (12,205,629) |
| 1989 | 2,341,960 | (9,478,000) | 6,634,600 | (1,219,691) ^b | (283,857) | (2,004,988) | 79,643 | (2,084,631) |
| 1990 | 3,030,010 | | | (695,450) | | 2,334,560 | 101,460 | 2,223,100 |
| 1991 | 6,223,042 | | | (2,925,429) | | 3,297,613 | 210,454 | 3,087,159 |
| 1992 | 2,737,259 | | | (1,174,655) | | 1,562,604 | 91,951 | 1,470,653 |
| 1993 | 2,979,255 | | | (238,130) | | 2,741,125 | 99,897 | 2,641,228 |
| 1994 | 3,192,213 | | | (1,962,549) | | 1,229,664 | 107,281 | 1,122,383 |
| 1995 | 2,721,978 | | | (647,138) | | 2,074,840 | 91,218 | 1,983,622 |
| 1996 | 3,391,678 | | | (1,482,396) | | 1,909,282 | 113,244 | 1,796,038 |
| 1997 | 3,634,267 | | | (1,520,219) | | 2,114,048 | 121,132 | 1,992,916 |
| 1998 | 5,342,834 | | | (1,107,501) | | 4,235,333 | 177,132 | 4,058,201 |
| 1999 | 8,867,742 | | | (2,696,200) | | 6,171,542 | 301,424 | 5,870,118 |
| 2000 | 2,857,534 | | | (3,300,053) | | (442,519) | 98,145 | (540,665) |
| 2001 | 2,623,227 | | | (444,009) | | 2,179,218 | 89,494 | 2,089,724 |
| 2002 | 3,752,486 | | | (791,319) | | 2,961,167 | 124,386 | 2,836,780 |
| 2003 | 3,258,583 | | | (2,389,979) | | 868,604 | 107,566 | 761,038 |
| 2004 | 2,874,629 | | | (952,940) | | 1,921,689 | 94,885 | 1,826,804 |
| 2005 | 3,940,876 | | | (1,409,296) | | 2,531,580 | 130,049 | 2,401,531 |
| 2006 | 5,790,721 | | | (868,449) | | 4,922,272 | 193,303 | 4,728,968 |
| 2007 | 4,086,170 | | | (939,879) | | 3,146,291 | 134,850 | 3,011,441 |
| 2008 | 3,807,087 | | | (1,670,278) | | 2,136,809 | 125,119 | 2,011,690 |
| 2009 | 4,607,737 | | | (1,123,705) | | 3,484,032 | 152,057 | 3,331,975 |
| Total | 132,198,582 | (9,478,000) | 6,634,600 | (49,427,990) | (2,323,609) | 77,603,583 | 4,451,518 | 73,152,065 |

^a Under Assembly Bill 1442, the General Fund paid 20% of the Suisun Marsh costs through June 1988, which totaled \$9,478,000. This payment included \$2,843,400, which represents 7% of the costs through June 1988 paid by the General Fund. This amount has reduced the costs billed to the SWP water contractors. The remaining \$6,634,600 received from the General Fund represents DWR's recreation project purpose share of 14%.

^b Excludes interest payments made by Reclamation in 1988 and 1989.

^c Allocation factors for capital recreation costs have changed from 14% to 3.4%, and operations and maintenance recreation costs from 14% to 3.3%.



Chapter 5

Local Assistance

Harvesting tomatoes.

Significant Events in 2009

The California Irrigation Management Information System (CIMIS) released the spatially distributed reference evapotranspiration (ET₀) data, known as Spatial CIMIS, to the public in September 2009.

The revised Model Water Efficient Landscape Ordinance (MWELO) was adopted by the Department of Water Resources (DWR) in September 2009, after undergoing a public review process in accordance with the Administrative Procedure Act.

The Recycling and Water Desalination Section conducted public workshops and public review of proposed dual plumbing standards for use of recycled water in buildings.

DWR managed 53 cooperative agreements awarded as part of the urban emergency drought grant program, created to deal with urban water shortages.

In 2009, the Water Use and Efficiency Branch continued to provide technical assistance on how to prepare an urban water management plan. DWR received 5 urban water management plans.

Due to the State fiscal crisis, a bond freeze was issued by the Department of Finance on December 18, 2008. In general, the freeze caused suspension of all bond-funded projects and prohibited authorizing new grants for bond-funded projects. Activities to prioritize existing projects, use available funds for the most critical projects, recover from the immediate crisis, and restart projects in a prudent manner, occurred in 2009.

Information in this chapter was contributed by the Division of Statewide Integrated Water Management, the Division of Environmental Services, and the Division of Integrated Regional Water Management.

The Department of Water Resources (DWR) manages the Davis-Grunsky Act Program, water use efficiency, agricultural drainage, and Water Conservation Bond Law programs, and participates in several other programs that assist local agencies and benefit State Water Project (SWP) water contractors.

Davis-Grunsky Act Program

The Davis-Grunsky Act, authorized in 1960 as part of the Burns-Porter Act, provides construction loans for local domestic water projects and agricultural water conservation projects. It also provides grants for recreation and fish and wildlife enhancement. Loans and grants may be given to rehabilitate dams and reservoirs.

DWR's ongoing administration of Davis-Grunsky program loans and grants provides oversight of the 32 recreation projects to ensure compliance with the recreation contracts. Administration costs are recovered from revenues generated by repayment of Davis-Grunsky Act loans. The recreation grant contracts are being amended to reflect actual facilities constructed and the modification of DWR's fee oversight function.

Water Use Efficiency

The Water Use and Efficiency Branch in the Division of Statewide Integrated Water Management activities include providing technical assistance to local agencies; managing water use efficiency financial assistance programs; managing the California Irrigation Management Information System (CIMIS); reviewing, tracking, and reporting on urban and agricultural water management plans; and managing drainage and water recycling/desalination projects.

California Irrigation Management Information System

CIMIS is a network of more than 140 automated weather stations that collects weather data and transmits it to a central repository in Sacramento each day. After performing quality control and calculations, the data are made available to the public for such diverse purposes as irrigation scheduling, resource planning, research, and modeling.

In 2009, DWR's CIMIS network remained at 134 stations, with approximately 53 percent of the stations on the network belonging to local cooperators. The demand for CIMIS data has been increasing steadily since its establishment in 1982. In 2009, the number of registered data users had grown from 661 in 1989, to more than 31,000.

Approximately 2,000,000 reports were generated from the database using the CIMIS website in 2009. Thousands of reports were also retrieved from the CIMIS ftp site. Users can register online, access archived data, download data files, and peruse content about the CIMIS program and other helpful meta data and information. A separate but concurrently operating database and web application is maintained for redundancy to protect the data.

CIMIS released the spatially distributed reference evapotranspiration (ET₀) data, known as Spatial CIMIS, to the public in September 2009. Spatial CIMIS is produced by coupling remotely sensed data from

the National Oceanic and Atmospheric Administration's Geostationary Operational Environmental Satellite with point measurements from CIMIS stations to estimate ET_0 data at 2-km grids.

The passage of the Water Conservation Act of 2009 (California Senate Bill X7-7), reemphasized the need for CIMIS to provide good quality data in a timely manner. SB X7-7 requires all water suppliers to increase water use efficiency. It also requires, among other things, the development of agricultural water management plans and a reduction in urban water consumption by 20 percent by the year 2020. Also, the Model Water Efficient Landscape Ordinance (MWELO), that is in the process of being updated as a requirement of Assembly Bill (AB) 1881 (2006, Laird), cites CIMIS as a source of reliable data to estimate water use by irrigated landscape. The revised MWELO was adopted by DWR in September 2009, after undergoing a public review process.

CIMIS is, therefore, planning to upgrade its hardware and software to accommodate the anticipated increase in demand for data to implement SB X7-7 and MWELO. The revised MWELO retains the water budget method, but increases the efficiency standards in new landscapes over 2,500 square feet. The update includes prescriptive measures to reduce runoff and water waste and foster sustainable landscaping practices. Cities and counties are required to either adopt the MWELO or their own ordinance using the model ordinance as a guide by January 1, 2010.

Recycling and Water Desalination

The goal of the Division of Statewide Integrated Water Management's Recycling and Water Desalination Section is to improve water use efficiency by promoting increased use of nonconventional water sources—namely recycled water and desalinated brackish and ocean waters—through

planning, technical, and financial assistance. As part of a balanced water portfolio, nonconventional water sources will help meet existing and future water supply and environmental needs. The section's mission consists of increasing safe and beneficial use of recycled water, advancing energy-efficient treatment and desalination technologies, and encouraging economically and environmentally acceptable use of desalinated brackish and ocean waters.

In 2009, Recycling and Water Desalination Section activities included the following:

- provided timely water recycling and desalination information reports;
- continued to develop new knowledge on water recycling and desalination activities and projects in California;
- continued to manage grant agreements for 48 desalination projects awarded in the first and second cycles of Proposition 50's desalination grant program. The funded projects include: 14 research and development projects, 15 pilot projects and demonstrations, 12 feasibility studies, and 7 construction projects;
- continued to provide technical knowledge on water recycling and water desalination issues, including responses to questions from policy makers, regulators, State and local agencies, and the public on permitting issues; public health regulations; types, locations, and amounts of water reuse occurring; and desalinated water production and use;
- represented DWR in several meetings, workshops, and conferences (e.g., Multi-State Salinity Summit in Las Vegas, Nevada; Water Education Foundation Future Water Leader Group Learning Workshop in Sacramento; Bay Area Water Forum), and published technical papers on water recycling and desalination;
- made presentations about California's water recycling and desalination activities to DWR's visitors;

- assisted the California Building Standards Commission's staff address comments from the public as well as the Green Building Code Advisory Committee concerning proposed water use efficiency standards and the use of recycled water and graywater in green buildings. The standards are to be included in the proposed California Green Building Standards Code as part of Title 24;
- conducted public workshops and public review of proposed dual plumbing standards for use of recycled water in buildings. These standards are to be incorporated into the California Plumbing Code. Submitted draft for approval by the California Building Standards Commission. This plumbing code change implements a recommendation of the 2002 Recycled Water Task Force;
- produced report titled, *Logistics for Deploying Mobile Water Desalination Units*;
- provided input to the *California Water Plan Update 2009* and to the Governor's Drought Declaration;
- served on several project advisory committees to guide various desalination projects managed by the WaterReuse Research Foundation and Water Research Foundation (formerly the American Water Works Association Research Foundation or AwwaRF); and
- participated in Bureau of Reclamation's (Reclamation) Brine-Concentrate Management Study. The study aimed to survey the current state of Southern California's brine-concentrate treatment and disposal facilities, regulatory requirements, and emerging/secondary constituent issues; evaluate and compare treatment and disposal methods that could meet forecasted trends in brine-concentrate management for coastal and inland areas; and provide a comparative review of recommended projects for coastal and inland areas to meet expected brine-concentrate treatment and disposal requirements.

Proposition 50 Water Use Efficiency Grant Program

Proposition 50 has provided approximately \$105 million for the Water Use Efficiency grant program since 2005. The grant program provided funds for implementation of all urban Best Management Practices and agricultural Efficient Water Management Practices that would result in local, regional, and statewide benefits. The State benefits are water conservation, flow and timing, water quality, and energy, among others.

A competitive proposal solicitation package was developed for all grant cycles, along with a comprehensive review and evaluation of the project proposals. The proposal solicitation package defines project benefits, eligible projects, eligible applicants, funding caps, reporting, and other contract requirements.

In 2009, and following the award of 53 Drought Assistance grants in the summer of 2008 in response to the Governor's drought emergency declaration, DWR continued developing agreements for the awarded grants. Unfortunately, due to the State's fiscal crisis and the funding freeze, a "Stop Work" order affected all the water use efficiency grants (more than 150 active agreements), including the drought assistance grants. Even though the Stop Work order will remain in effect until 2010, several agencies took the risk and opted to continue working on their projects.

Agricultural Water Management Plans

Throughout 2009, the Agricultural Water Management Council (79 agricultural water suppliers and 3 environmental organizations) continued its efforts under the Memorandum of Understanding regarding the efficient water management practices by agricultural water suppliers) continued to improve water use efficiency through implementation

of efficient water management practices. The council recognizes and tracks water supplier water management planning and implementation of cost-effective, efficient water management practices through a review and endorsement procedure. The signatory agricultural water suppliers voluntarily commit to implement locally cost-effective management practices. Agricultural water suppliers represent more than 4.6 million retail irrigated acres and a total of 5.86 million acres of agricultural land.

DWR continued cooperative agreements with the Agricultural Water Management Council to help fund a project that will enable water suppliers to submit their water management plans online and to provide technical assistance to the agricultural water suppliers to develop water management plans and implement efficiency measures.

Urban Water Management Plans

DWR received five urban water management plans in 2009. The 2005 urban water management plan Guidebook and DWR 2005 urban water management plan Review Sheets were posted on the Urban Water Management website and provided to urban water suppliers throughout the State. In addition, technical assistance for preparing an urban water management plan was available.

Assembly Bill 1420 Compliance

AB 1420 (Chapter 628, Statutes of 2007) amended the Urban Water Management Planning Act (Water Code Section 10610 et seq.). AB 1420, effective January 1, 2009, requires that the terms of, and eligibility for, any water management grant or loan made to an urban water supplier and awarded or administered by DWR, the State Water Resources Control Board (SWRCB), or the California Bay-Delta Authority or its successor agency (collectively referred to

as “Funding Agencies”), be conditioned on the implementation of the water demand management measures described in the urban water management plan, as determined by DWR.

Water management grants and loans include programs and projects for surface water or groundwater storage, recycling, desalination, water conservation, water supply reliability, and water supply augmentation. This funding includes, but is not limited to, funds made available pursuant to Public Resources Code Section 75026 (the Integrated Regional Water Management Program).

AB 1420 required DWR to consult with SWRCB and the California Bay-Delta Authority in the development of eligibility requirements that consider the California Urban Water Conservation Council’s Best Management Practices and alternative approaches that provide equal or greater water savings. In 2009, three workshops were conducted, and AB 1420 compliance criteria were released.

Agricultural Drainage Program

The Agricultural Drainage Program’s mission is to seek in-valley solutions to the surface and subsurface agricultural drainage water problems in the State, particularly the San Joaquin Valley, and to improve water quality in the San Joaquin River by promoting measures to reduce salinity and discharge of harmful elements.

Even though the San Joaquin Valley Drainage Implementation Program has been idle since 2003, DWR continues to implement many of its recommendations through its Agricultural Drainage Program. DWR works in partnership with California universities, CALFED, Reclamation, resource conservation districts, watershed groups, water and drainage districts, and many

other local, State, and federal entities. These activities include:

- developing, educating, and promoting the use of Integrated On-Farm Regional Drainage Management systems in the San Joaquin Valley;
- providing technical assistance and collaborating with water and drainage districts and local entities to reduce and control surface and subsurface agricultural drainage water;
- maintaining research and demonstration projects to develop drainage reuse systems, including development of cost-effective, salt-tolerant crops (including energy crops), drainage treatment, disposal technologies, and salt separation and utilization;
- monitoring the quality and distribution of shallow groundwater levels in drainage-impaired areas of the San Joaquin Valley;
- promoting agricultural water and energy use efficiency programs in drainage-impaired lands to reduce the volume of surface and subsurface drainage water and expand regional water supplies;
- maintaining programs to help improve water quality in the San Joaquin River; and
- providing grants for control of agricultural drainage water and the reduction of its toxic elements, using Propositions 13, 50, 84, 204, and DWR project funding.

The Agricultural Drainage Program is divided into two major activities: management of Proposition 204 (the Drainage Management Subaccount) and the San Joaquin Valley Agricultural Drainage Program.

Proposition 204 (Drainage Management Subaccount)

In 1996, Proposition 204, The Safe, Clean, Reliable Water Supply Act, authorized the transfer of approximately \$6.1 million from

the SWRCB to the California Department of Food and Agriculture. In 1997, the California Department of Food and Agriculture, SWRCB, and DWR signed a Memorandum of Understanding that established a process for utilizing the funds designated for agricultural drainage water management activities. In 1999, the California Department of Food and Agriculture and DWR signed an interagency agreement to transfer the funds to DWR for developing and implementing programs consistent with Water Code Section 78645, as outlined in the Memorandum of Understanding. The program's goal is to develop methods of using and concentrating salts and reducing trace element contaminants in the State's subsurface agricultural drainage water.

When bond funds are available, DWR solicits proposals from public entities seeking funding for Proposition 204 eligible activities. A technical review committee screens the proposals. DWR submits the proposal packages to an oversight committee comprised of representatives from DWR, the California Department of Food and Agriculture, and SWRCB for final approval. Ultimately, DWR is responsible for preparing and managing contracts for the approved proposals. Due to fiscal constraints, there were no solicitations for proposals in 2009.

San Joaquin Valley Agricultural Drainage Program

This program consists of several activities, including drainage monitoring and evaluation, drainage treatment, integrated on-farm drainage management, drainage reduction and reuse, environmental services, and the San Joaquin River Water Quality Improvement Program.

Drainage Monitoring and Evaluation

Drainage monitoring and evaluation provides information on the quality, quantity, and movement of drainage water. In 2009, the following activities were conducted:

- monitoring shallow groundwater levels and flows, and collecting water quality data for drainage water from west side San Joaquin Valley tile drain sumps;
- measuring groundwater levels measured quarterly for approximately 200 wells in Kern County;
- preparing shallow groundwater and irrigation methods maps of drainage-impaired areas using drainage monitoring data in conjunction with land use and irrigation methods data;
- providing assistance for the collection of groundwater, soil, and operational data for the integrated on-farm drainage management project at Red Rock Ranch (RRR) in western Fresno County; and
- maintaining a website that includes information on drainage programs and activities, salinity and shallow groundwater maps, Proposition 204 grants, and links related to other agricultural drainage programs.

Drainage Treatment

Development of Membrane Treatment of Agricultural Drainage Water. DWR continues to fund research on the use of membrane treatment for desalting agricultural drainage water under a multiyear contract with the University of California, Los Angeles.

Grassland Area Farmers: Compliance with Water Quality Control Plan. DWR continues to participate in a multiagency cooperative effort with Grassland Area Farmers to comply with the objectives of the Central Valley Regional Water Quality Control Board's *Water Quality Control Plan (Basin Plan) for the Sacramento River Basin and the San Joaquin River Basin*. One of the key components of the plan is drainage water treatment.

Ion Exchange Pretreatment Investigations. DWR constructed and continues to operate a manually controlled ion-exchange system. The goal of this project is to determine the

effectiveness of ion-exchange treatment on removing hardness from drainage water that consists of high total dissolved solids. Producing “soft” drainage water reduces the need for cleaning or scale removal in other treatment technologies that DWR will be testing in the future. These future treatment technologies consist of electrocoagulation, vapor compression distillation, and reverse osmosis. Another benefit of ion exchange is that the regenerate will be in a form that can be utilized as a dust-control product (calcium chloride and magnesium chloride). DWR is effectively producing softened water at this time.

Agricultural Subsurface Drainage: Salt Recovery, Purification, and Utilization. DWR continues to support investigations of processes for concentrating and purifying drainage salts for marketing purposes.

Selenium Removal from Agricultural Subsurface Water. DWR continues to participate in cooperative research with the University of California Salinity/Drainage Program. Activities include a multiyear study for mitigating selenium eco-toxic risk in agricultural drainage systems.

Integrated On-Farm Drainage Management

DWR South Central Region Office's Integrated On-Farm Drainage Management (IFDM) became a permanent activity when the Integrated Drainage Management Section was created in 2001. Its objective is to provide technical assistance on IFDM systems through advisory, technical, and oversight committees. IFDM is a drainage management system based on sequential reuse of saline drainage water to irrigate crops of progressively increasing salt tolerance. Each sequential reuse reduces the volume of drainage water and increases the salt concentration. Drainage water too saline to irrigate crops is applied to solar evaporators, a management practice that SWRCB supports. The IFDM program

funds, administers, and monitors contracts with State, federal, university, and local entities to learn more about IFDM systems. Findings indicate that IFDM systems have less significant environmental impacts than other options, and they reduce the volume of drainage water. The program is investigating the use of accelerated evaporation systems (solar evaporators) for zero-discharge systems and evaluating the feasibility of using salt-gradient solar pond systems as a way of removing salt and generating heat or electricity for agricultural use.

IFDM program staff also:

- coordinate IFDM research activities and data collection with other agencies;
- assist growers and local agencies in planning and developing IFDM systems;
- provide assistance to research projects for the development of crops, including research being performed at RRR by California State University, Fresno, to assess the suitability of various salt-tolerant forages and halophytes for the sequential reuse of drainage water, forage quality, productivity, and water use; and
- cooperate with the U.S. Department of Agriculture in an investigation to determine crop production using an active drainage management system that employs *in situ* use of shallow groundwater and subsurface drainage water.

DWR continues to work cooperatively with Reclamation to investigate the long-term interaction of irrigation, rainfall, and local and regional groundwater with the movement of salts and selenium in the soils of RRR. The project will use a three-dimensional numerical model for fully integrated subsurface and surface flow and solute transport. DWR continues to monitor a series of observation wells at RRR and surrounding areas, collect water quality

samples, and measure groundwater levels to provide data for the model. Other activities include the following:

- assisting growers, water and drainage districts, and regional entities, by providing information on salt-tolerant grasses and IFDM design specifications;
- assisting SWRCB to develop policies for the management of drainage water, salt, and selenium; and
- improving enhanced evaporation features of the pilot solar evaporator.

DWR continues to assist Reclamation with performing project tasks for the HydroGeoSphere project at RRR. To facilitate development of the conceptual model, DWR staff collected topographic survey data at RRR and surrounding areas to determine elevation points and to locate fixed works such as sumps, pumps, and wells. The model results from this case study will be useful for the formulation of optimal design and management guidelines for IFDM systems.

DWR is continuing research on *Prosopis alba*, an Argentine mesquite tree, in cooperation with the Forestry Research Station at Catholic University of Santiago del Estero in Argentina. *Prosopis alba*, which originated from the plantations of Catholic University of Santiago del Estero, is a highly salt-tolerant tree species that holds promise of ameliorating subsurface drainage problems in the soils of the western San Joaquin Valley. There were a number of trees that were planted at several drainage-impaired locations within the west side of the San Joaquin Valley. DWR has partnered with the Westside Resource Conservation District to monitor the growth and performance of the trees. After the planting trial, a group of trees with the best salt and boron tolerance qualities will be selected for final testing.

DWR continues to collect operational data from IFDM projects at RRR and AndrewsAg, Inc. for analysis of performance. DWR

staff also provided technical information and assistance on an agriforestry planting program on Kern County farms with salinity and shallow groundwater problems.

Central Valley Salinity Management Program

In 2006, the Central Valley Regional Water Quality Control Board and SWRCB initiated a comprehensive effort to address salinity problems in California's Central Valley and adopt long-term solutions that would lead to enhanced water quality and economic sustainability. The Central Valley Salinity Alternatives for Long-term Sustainability is an effort to develop and implement a comprehensive salinity management program. The Central Valley Salinity Alternatives for Long-term Sustainability's goal is to maintain a healthy environment and a good quality of life for all Californians by protecting our most essential and vulnerable resource: water. DWR is involved in the process by providing expertise in salinity management through participation in the committees and activities of the Central Valley Salinity Policy Group. This group provides guidance and technical support on specific issues through various committees (the Technical Advisory Committee, Social and Economic Impact Committee, and Public Education and Outreach Committee) and overall direction and management (the Executive Committee) for the development of a comprehensive Central Valley salinity management plan.

Drainage Reduction and Reuse Program

DWR's Drainage Reduction and Reuse Program offers technical assistance, information, and other resources to growers and irrigators for applying irrigation water efficiently to reduce both excessive deep percolation and drainage water from the immediate on-farm source, while maintaining salt balance in the root zone.

The program objective is being achieved through on-farm demonstration projects, studies, research, training, and workshops on scheduling irrigation, management, advances in irrigation technologies, evaluating irrigation systems, reusing drainage water, and managing salinity.

Environmental Services

DWR's South Central Region Environmental Compliance Section investigates and reports on short- and long-term use and operation of evaporation ponds, IFDM, and other systems used for disposal and management of drainage water. Environmental activities include the following:

- RRR research projects that involve required biological monitoring activities in accordance with Waste Discharge Requirements permits;
- helping landowners locate information required for preparing California Environmental Quality Act (CEQA) documentation necessary for obtaining permits and authorization for implementing, monitoring, and operating drainage reduction, treatment, and disposal projects;
- mapping agriforestry and herbaceous plots in drainage-impacted areas, using global positioning system technology, which is then imported into a geographic information system format linked to a database created to track key information associated with development of vegetation plots; and
- responding to information requests from landowners seeking a better understanding of the CEQA and National Environmental Policy Act public review processes, so they can provide meaningful comments on upcoming State and federal drainage-related projects.

San Joaquin River Water Quality Improvement Program

DWR's Agricultural Drainage Program, in collaboration with other agencies, continues to make significant efforts to improve water quality in the San Joaquin River to benefit the State and SWP water contractors. These efforts are intended to control salinity and selenium discharges upstream of Vernalis. They include promoting on-farm and regional water management activities to reduce subsurface drainage, real-time water quality management to maximize the assimilative capacity of the San Joaquin River, and efforts to time wetlands discharges when there is assimilative capacity in the San Joaquin River.

Specific efforts include the West Side Regional Plan, Reclamation's San Luis Drainage Feature Reevaluation to provide drainage service to the San Luis Unit of the Central Valley Project (the Unit), and the IFDM program maintained by DWR and collaborating agencies.

On-farm and Regional Drainage Management Activities. Agricultural Drainage Program staff have been working with the Grassland Area Farmers to help them reduce subsurface agricultural drainage water discharges into the San Joaquin River. Drainage management activities involving source control and drainage reuse have proven effective in reducing salt loads in the San Joaquin River. This is demonstrated by the efforts of the Grassland Area Farmers on the Grassland Bypass Project. Since the implementation of the Grassland Bypass Project, drainage discharges have decreased from 58,000 af to less than 14,000 af, and salt loads have been reduced from 210,000 tons to about 57,000 tons. The reductions are possible due to the San Joaquin River Improvement Project, an important Grassland Bypass Project component, funded by DWR, through Propositions 13 and 50. It now consists of 6,000 acres of lands

dedicated for reuse of subsurface drainage water generated by Grassland Area Farmers to grow salt-tolerant crops. DWR continues to provide technical assistance to continue improving and developing this part of the Grassland Bypass Project.

Real-time Water Quality Monitoring Program.

The Real-time Water Quality Monitoring Program (RTWQMP) collects flow, electrical conductivity, and temperature data from several satellite-linked and web-accessible stations on the mainstem of the San Joaquin River and its tributaries. The information provided can be used by San Joaquin River water managers and stakeholders to improve management and coordination of east side reservoir releases and agricultural and wetland drainage flows to achieve water quality objectives at the San Joaquin River compliance points. In the early stages, the RTWQMP was funded by Reclamation and then by CALFED. Currently, DWR has assumed responsibility for funding most of the RTWQMP.

Forecasting flow and salinity conditions on the San Joaquin River allows decision makers to take advantage of assimilative capacity of the river when available. Data collected from the network of monitoring stations is used with the San Joaquin River Input-Output Day model to generate biweekly forecasts of salinity and flow conditions on the river near Vernalis and other upstream stations. DWR publishes the information weekly on its website.

Central Valley Project's San Luis Unit Drainage Resolution.

DWR continues to participate in the drainage resolution process to provide information to Reclamation on a technical level, as well as a policy level, to protect against potential adverse effects to DWR's water supply, water quality, shifting drainage liability to the State of California, and the financial liability associated with federal/State facilities.

San Luis Drainage Feature Reevaluation. The San Luis Drainage Feature Reevaluation is a Reclamation project. The project purpose is to provide agricultural drainage service to the Unit to achieve a long-term, sustainable salt and water balance in the root zone of irrigated lands in the Unit and adjacent areas. A long-term sustainable salt and water balance is needed to maintain sustainable agriculture in the Unit and the region. The proposed federal action is to plan and construct a drainage system for the Unit. This proposed action would meet the needs of the Unit for drainage service and fulfill the requirements of a February 2000 court order.

The Agricultural Drainage Program staff provided assistance to Reclamation on technical issues.

Salinity Objectives in the South Delta. Staff from the Agricultural Drainage Program continued to participate with a DWR team in the SWRCB public process to review salinity objectives in the South Delta. Preparation for multiple SWRCB meetings on the subject have included discussion of issues, available information, and funding and development, and preparation of specific comments, documents, and presentations to provide to SWRCB in coordination with other organizations such as the State Water Contractors, Reclamation, Central Valley Project contractors, and the San Joaquin River Group Authority.

In March 2009, the SWRCB staff held a workshop to present an update on the status of the effort to reevaluate the southern Delta salinity objectives.

A draft of the crop salt-tolerance study was completed in July 2009. This study was funded by DWR through the SWRCB.

The study is of primary importance to DWR, since DWR is partially responsible for salinity compliance standards at three locations in the southern Delta.

American Society of Civil Engineers Agricultural Salinity Assessment and Management. Agricultural Drainage Program staff participated in updating Chapter 23 of the American Society of Civil Engineers Manual No. 71 *Agricultural Salinity Assessment and Management*, which was released in 1990. The manual integrates contemporary concepts and management practices for agricultural water and salinity problems. It consists of more than 34 chapters, written by multiple authors, and covers not only the technical and scientific aspects, but also the environmental, economic, and legal aspects of the topic.

Chapter 23 covers the treatment and disposal of subsurface drainage from irrigated lands, including technical aspects and current treatment technology research.

Water Conservation Bond Laws

To help local agencies obtain financing for their water management programs, California voters approved eight bond laws between 1984 and 2006 authorizing DWR to provide low-interest loans and grants to fund project feasibility studies or construction activities:

- The Clean Water Bond Law of 1984 (Proposition 25) authorized \$10.5 million for water conservation projects.
- The Water Conservation and Water Quality Bond Law of 1986 (Proposition 44) authorized \$75 million for water conservation and groundwater recharge projects.
- The Water Conservation Bond Law of 1988 (Proposition 82) authorized \$60 million for water conservation, groundwater recharge, and new local water supply improvements.
- The Safe, Clean, Reliable Water Supply Act (Proposition 204), approved in 1996, authorized \$55 million for water

conservation, groundwater recharge, and local water supply projects.

- The Safe Drinking Water, Clean Water, Watershed Protection, and Flood Protection Bond Act (Proposition 13), approved in 2000, authorized \$535 million for agricultural and urban water conservation, groundwater recharge, infrastructure rehabilitation, groundwater storage, and interim reliable water supply projects and studies.
- The Water Security, Clean Drinking Water, Coastal and Beach Protection Act of 2002 (Proposition 50) authorized \$500 million for the Integrated Regional Water Management (IRWM) Grant Program to be implemented jointly by DWR and SWRCB.
- The Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006 (Proposition 84) authorized \$1 billion to continue the IRWM program. Under this program, grants and construction loans are available with repayment periods of up to 20 years at reduced interest rates for most programs.
- The Disaster Preparedness and Flood Prevention Bond Act of 2006 (Proposition 1E), authorized \$300 million for IRWM Stormwater Flood Management.

Propositions 25, 44, and 204

Funding is fully obligated.

Proposition 82

New local water supply construction and feasibility study loans are still available. Water conservation and groundwater recharge funding has been fully obligated.

Proposition 13

Agricultural water conservation loan funding is still available.

All loan and grant funds for the Groundwater Recharge, Infrastructure Rehabilitation, Urban Water Conservation, Groundwater Storage, and Interim Reliable Water Supply programs have been obligated.

Proposition 50

All grant funds under the Proposition 50 IRWM program have been fully obligated.

Propositions 84 and 1E

In 2009, DWR released and performed the first cycle of the Region Acceptance Process for the IRWM program, as funded by Propositions 84 and 1E. The Region Acceptance Process is a prerequisite to applying for any IRWM grant solicitation and is used to accept IRWM regions into the grant program. In response to the release of the Region Acceptance Process, DWR received 46 information packets from IRWM regions seeking grant program acceptance. Of the 46 IRWM regions, 36 were granted full acceptance (allowed to apply to any available IRWM grant) and 10 were granted conditional acceptance (allowed to apply to limited grant solicitations until conditions were met).

In addition, staff continued developing the IRWM grant program guidelines, as well as the PSPs for Planning and Implementation grants and Stormwater Flood Management grants, as funded by Propositions 84 and 1E, respectively.

Local Water Supply

Projects in local water supply are constructed to increase water supplies, and include the following:

- new conveyance and/or storage facilities;
- groundwater extraction facilities, well-field development; and
- desalination (ocean or brackish groundwater recovery).

Integrated Regional Water Management

Projects in this category protect communities from drought, protect and improve water quality, and improve water security by reducing dependence on imported water.

Water Conservation Bond Laws— Projects and Funding

Due to the State fiscal crisis, a bond freeze was issued by the Department of Finance on December 18, 2008. In general, the freeze caused suspension of all bond-funded projects and prohibited authorizing new grants for bond-funded projects. Activities to prioritize existing projects, use available funds for the most critical projects, recover from the immediate crisis, and restart projects in a prudent manner, occurred in 2009.



Chapter 6

Legislation and Litigation

The California State Capitol dome.

Significant Events in 2009

Significant legislation related to the Delta ecosystem and water supply, groundwater monitoring, agricultural and urban water conservation, and water diversion reporting requirements passed in 2009.

Information for this chapter was provided by the Assistant Director, Legislative Affairs Office, and the Office of the Chief Counsel.

The Department of Water Resources (DWR) monitors State and federal legislation that affects management of the State Water Project (SWP). Legislative bill tracking involves reviewing legislation at its introduction, evaluating amendments in State Assembly and Senate committee hearings, and monitoring its enactment into law. The DWR Assistant Director for Legislation monitors proposed legislation. The Office of the Chief Counsel tracks State and federal litigation that impacts management of the SWP. The DWR Chief Counsel also manages legal cases that involve SWP operations.

Legislation

State Legislation

SBX7 1 (Simitan; Chapter 5 of the Seventh Extraordinary Session, Statutes of 2009)—Delta Governance/Delta Plan

SBX7 1 established a framework to achieve the co-equal goals of providing a more reliable water supply to California and restoring and enhancing the Delta ecosystem. This bill created a Delta Stewardship Council to develop a Delta Plan to guide State and local actions in the Delta, established the Sacramento-San Joaquin Delta Conservancy to implement ecosystem restoration activities within the Delta, and restructured the current Delta Protection Commission.

SBX7 2 (Cogdill; Chapter 3 of the Seventh Extraordinary Session, Statutes of 2009)—Safe, Clean, and Reliable Drinking Water Supply Act of 2010

SBX7 2 enacted the Safe, Clean, and Reliable Drinking Water Supply Act of 2010 as an \$11.14 billion general obligation bond to provide funding for California's aging water infrastructure and for projects and programs to address ecosystem and water supply issues in California.

SBX7 6 (Steinberg; Chapter 1 of the Seventh Extraordinary Session, Statutes of 2009)—Groundwater Monitoring

SBX7 6 required groundwater monitoring to help better manage resources during both normal water years and drought conditions.

SBX7 7 (Steinberg; Chapter 4 of the Seventh Extraordinary Session, Statutes of 2009)—Statewide Water Conservation

SBX7 7 created a framework for future planning and actions by urban and agricultural water suppliers to reduce California's water use. This bill requires the development of agricultural water management plans and requires urban water agencies to reduce statewide per capita water consumption 20 percent by 2020.

SBX7 8 (Steinberg; Chapter 2 of the Seventh Extraordinary Session, Statutes of 2009)—Water Diversion and Use/Funding

SBX7 8 improved accounting of the location and amounts of water being diverted from the Delta by recasting and revising exemptions from the water diversion reporting requirements under current law. This bill appropriated bond funds for various activities to benefit the Delta ecosystem and secure the reliability of the State's water supply, and to increase staffing at the State Water Resources Control Board (SWRCB) to manage the duties of this statute.

Federal Legislation

There was no significant federal legislation affecting management of the SWP in 2009.

Litigation

As of December 31, 2009, DWR was involved in, or closely monitored, a number of court cases and other actions related to the management of the SWP.

Sacramento-San Joaquin Delta Delta Smelt

A coalition of environmental groups challenged the 2005 biological opinion (BO) issued by the U.S. Fish and Wildlife Service (USFWS) which found that SWP and Central Valley Project (CVP) operations did not jeopardize the continued existence of the delta smelt. (*Natural Resources Defense Council, et al. v. Gale A. Norton, et al.* (U.S. District Court for the Eastern District of California, 2005, Case No. 05 CV 01207 OWW (LJO)).) In the action of *Natural Resources Defense Council, et al. v. Kempthorne, et al.*, the plaintiffs claim the USFWS opinion fails to adequately consider or address SWP and CVP effects on delta smelt. The plaintiffs also claim the opinion improperly relies on uncertain measures and the adaptive management process without adequate evidence that the measures will be undertaken and be effective. The case seeks to have the U.S. Department of the Interior and USFWS withdraw the opinion and not take any action in reliance upon it.

DWR intervened to protect its interests in the BO relevant to the operations of the SWP, filing an answer to an amended complaint on October 24, 2006.

On May 25, 2007, the federal district court issued a decision on the summary judgment motion finding that the 2005 BO was invalid because, among other issues, the measures to protect delta smelt were not sufficiently

prescriptive. In order to determine how the projects will operate pending completion of a new BO, the judge requested the parties prepare an interim remedy.

In August 2007, the court held eight days of hearings on the proposed remedies by plaintiffs and defendants. On August 31, 2007, the judge issued a ruling from the bench. The order:

- provided remand of the BO to USFWS without vacating the existing BO, but required compliance with the interim remedy;
- enjoined DWR and the Bureau of Reclamation (Reclamation) from taking any actions inconsistent with the interim remedy;
- ordered a USFWS status report to be filed with the court on April 30, 2008, and set September 15, 2008, as the deadline for USFWS to issue a new delta smelt BO;
- provided a public health and safety exception for SWP and CVP operations;
- provided that the injunction ends after issuance of a new BO or further order or final judgment, whichever occurs first; and
- required additional fish/larval monitoring, flow restrictions, and other protective measures for fish in SWP and CVP operations pending issuance of a new BO.

The court subsequently extended the deadline for USFWS to complete the BO from September 15, 2008, to December 15, 2008. USFWS issued a BO pertaining to the effect of SWP and CVP operations on delta smelt. In it, USFWS found that the operations could jeopardize the continued existence of the species.

A similar case was filed October 4, 2006 (*Watershed Enforcers, a project of California Sportfishing Protection Alliance, a non-profit corporation v. California Department of*

Water Resources, Lester Snow, Ralph Torres, David Starks, David Duval and L.D. Elmore (Alameda County Superior Court, Case No. RG06292124)). Watershed Enforcers asserts that DWR lacks authority for the losses, also known as “take,” of the endangered delta smelt and winter- and spring-run salmon. DWR believes that a number of agreements/plans starting as early as 1986 with the Department of Fish and Wildlife (DFW) provide for SWP compliance with the California Endangered Species Act (CESA) allowing “incidental take” of these fish. For the past 12 years, DWR has been operating the SWP while actively addressing and mitigating environmental impacts, including incidental take. Plaintiffs claim that DWR is not operating consistent with CESA because it has not obtained a permit, a consistency determination, or completed a conservation plan.

On March 22, 2007, the court gave DWR 60 days to obtain take authorization from DFW. DWR appealed. The parties also negotiated a joint motion for stay of the appeal through December 2008 to coordinate the federal BO reconsultation and issuance of a new BO by the end of 2008. DWR would then seek a consistency determination from DFW, in effect mooting the appeal. However, no further action occurred on this case in 2008.

In June 2009, the BO for salmonids was completed. Based on the federal BO, DWR requested from DFW that the BO be determined consistent with CESA. DFW issued consistency determinations for delta smelt and salmon which provided DWR take authorization, as required by the trial court. DWR dismissed its appeal and is waiting for other appellate matters to resolve so it can request a dismissal of the trial court order based on satisfaction of the order. Kern County Water Agency has continued its appeal, challenging DFW’s authority to require DWR to obtain incidental take permits under CESA.

In 2009, five other complaints were filed (Coalition for a Sustainable Delta (1:09-cv-422); Metropolitan Water District of Southern California (1:09-cv-631); State Water Contractors (1:09-cv-480); Stewart and Jasper Orchards (1:09-cv-892); and Family Farm Alliance (1:09-cv-1201)). All of the delta smelt cases have been consolidated and are referred to as the *Delta Smelt Consolidated Cases* (United States District Court, Eastern District of California, 1:09-cv-407).

On November 13, 2009, Judge Oliver Wanger issued a decision in the case based on one challenge that USFWS did not comply with the National Environmental Policy Act (NEPA). The court ruled that Reclamation must first conduct an environmental review under NEPA before implementing a BO that called for water reductions. The court also found that Reclamation’s provisional acceptance and implementation of the BO and its reasonable and prudent alternative (RPA) constituted federal action triggering NEPA because it represented a significant change to the operations status quo. The RPA called for actions that committed federal water to delta smelt protection. Reclamation’s implementation of the RPA resulted in reduced 2008–2009 water deliveries by several hundred thousand acre-feet. The court concluded that “project operations” were the appropriate focus for purposes of NEPA evaluation, thus Reclamation, not USFWS, was the appropriate lead agency.

Salmon

In another case (*Pacific Coast Federation of Fishermen’s Associations/Institute for Fisheries Resources, The Bay Institute, BayKeeper, and Its Deltakeeper Chapter, California Trout, Friends of the River, Natural Resources Defense Council, Northern California Council of the Federation of Fly Fishers, and Sacramento River Preservation Trust, all non-profit organizations and the Winnemem Wintu Tribe v. Carlos M. Gutierrez, in his official capacity as*

Secretary of Commerce, William T. Hogarth, in his official capacity as Assistant Administrator for Fisheries, National Marine Fisheries Service, National Oceanic and Atmospheric Administration, Dirk Kempthorne, in his official capacity as Secretary of the Interior, and William E. Rinne, in his official capacity as Acting Commissioner, United States Bureau of Reclamation and (Intervenors/Defendants) San Luis & Delta Mendota Water Authority, Westlands Water District, California Farm Bureau Federation, Glenn-Colusa Irrigation District, et al. and State Water Contractors, et al.), the plaintiffs, nine environmental groups, served a 60-day notice to the federal defendants, the National Marine Fisheries Service (NOAA Fisheries), of alleged violations of the Endangered Species Act on May 31, 2006.

DWR was not named as a defendant in this case but has intervened in this matter, providing similar input and contribution as in the delta smelt case. The defendants in this case attempted to consolidate the smelt and salmon/steelhead cases but the motion was denied. The smelt litigation went forward and an interim remedy order was issued on December 14, 2007. A similar litigation path is anticipated in this case.

Plaintiffs' amended complaint alleges that the survival and population stability of five salmon and steelhead species are threatened by the current and planned joint operations of the SWP and CVP. Plaintiffs allege the operations of the water projects continue to block fish passage to hundreds of miles of upstream spawning and rearing habitat; further reduce and degrade the remaining habitat due to water diversions; create high temperatures and changes in dissolved oxygen ratios and silt load; and draw large numbers of fish into the Central and South Delta as a result of operations of the Delta Cross Channel and the SWP and CVP pumps. Plaintiffs claim a percentage of salmon and steelhead are killed through direct entrainment from project water diversions

and from other unscreened diversions, resulting in a lower survival rate. Plaintiffs request the court declare the 2004 CVP/SWP coordinated operations BO unlawful and issue an injunction from implementation of project operations as described in the 2004 opinion.

A motion for summary judgment was heard before federal Judge Wanger on October 3, 2007.

On April 16, 2008, Judge Wanger held that the 2004 NOAA Fisheries BO: (1) did not reconcile factual findings and analysis with its conclusions; (2) failed to analyze impact on critical habitat; (3) failed to consider recovery of species; and (4) failed to include any analysis of the effects of climate change on SWP and CVP operations, and in turn on salmonids. NOAA Fisheries was ordered to prepare a new BO.

In September 2009, with six separate cases filed against Reclamation and NOAA Fisheries challenging the issuance and adoption of the original BO, and challenging that federal defendants failed to comply with NEPA, the Endangered Species Act, and the Administrative Procedure Act in preparing and approving the opinion, the cases were consolidated (*Consolidated Salmon Cases*, Eastern District of California, 1:09-cv-105).

Longfin Smelt

In March 2009, 27 of the State Water Contractors sued DFW and included DWR as a Real Party in Interest, challenging actions regarding Incidental Take Permit No. 2081-2009-001-03 issued by DFW (*State Water Contractors v. California Department of Fish and Game; Donald Koch, Director of the California Department of Fish and Game; California Department of Water Resources; Lester Snow, Director of the California Department of Water Resources*, Sacramento County Superior Court). The permit authorized the SWP to take longfin smelt,

which inhabit the Sacramento-San Joaquin Delta and the San Francisco and San Pablo Bay areas, under limited conditions that have the potential of substantially reducing the ability of the SWP to regulate the ongoing and long-term provision of water.

The State water contractors contended that implementation of the permit will reduce the ability of the SWP to supply water to millions of California's residents as well as farms and business. Petitioners also alleged that the permit violates CESA because DFW did not use the best available science in its decision-making process, and that the permit violates the California Constitution's prohibition against the waste or unreasonable use of water.

The case has been stayed until November 2010, pending completion of the federal litigation challenging the BOs for delta smelt and salmon.

State Water Resources Control Board Hearing

In February 2005, DWR and Reclamation petitioned the SWRCB. The petition requested a temporary change and delay of the effective date to implement the southern Delta agricultural water quality objective contained in SWRCB's Water Right Decision 1641 (D-1641). This objective was scheduled to begin on April 1, 2005. A second petition was submitted to request a change of the implementation date to April 1, 2008. (This date matched the date the southern Delta permanent gates were scheduled for operation.) SWRCB denied the first petition. No action was taken on the second petition.

On May 3, 2005, SWRCB notified DWR and Reclamation of its intention to issue a cease and desist order. This requested order sought to stop a potential violation of the southern Delta agricultural water quality objective of 0.7 millimhos per centimeter (mmhos/cm)

electrical conductivity (EC) that was imposed upon DWR and Reclamation. This water quality objective was scheduled to be in effect annually, from April 1 through August 31, beginning in 2005. D-1641 conditioned the operation of the SWP and CVP with implementation of this agricultural objective. DWR and Reclamation requested a hearing on the cease and desist order. In October and November 2005, DWR and Reclamation presented evidence and argued that the cease and desist order should not be issued due to the questionable relationship between EC levels and operation of the SWP and CVP.

On February 15, 2006, SWRCB issued a cease and desist order requiring DWR and Reclamation to take corrective actions to obviate the threat of noncompliance with conditions in D-1641 that implement the 0.7 mmhos/cm EC water quality requirement by constructing the southern Delta permanent gates or equivalent measures by July 1, 2009. The order also requires DWR and Reclamation to report to SWRCB if they exceed or threaten to exceed the water quality requirements, and to report the reasons for the exceedence. SWRCB will then determine if enforcement actions are necessary. The cease and desist order also allows Joint Point of Diversion operation if DWR and Reclamation comply with the conditions of their water rights and SWRCB's order.

SWRCB was asked to reconsider its cease and desist order. However, the board did not take any action on this request, and the cease and desist order became a final order on May 16, 2006. On June 15, 2006, Reclamation and the State and federal water contractors filed a complaint in federal district court against SWRCB challenging the cease and desist order. DWR and SWRCB agreed to toll the date for DWR to file to allow time for the parties to negotiate a settlement of the issues. Reclamation and the water contractors have also entered into

tolling agreements pending negotiations. Negotiations between the parties resulted in a letter from the SWRCB Executive Director that clarified the cease and desist order and extended DWR's time to file an action against the order to May 1, 2007.

In January 2007, SWRCB began workshops to review the southern Delta agricultural water quality objectives that are the subject of the cease and desist order and litigation. This review is consistent with the Executive Director's letter to DWR regarding these water quality objectives. The review is expected to require about 2 years to complete, after which SWRCB may consider modification of the objective in its water quality control plan and in DWR and Reclamation's water rights.

There was no action on this case in 2008.

In June 2009, the SWRCB held a hearing regarding modification of the schedule in the cease and desist order that required DWR and Reclamation to obviate the threat of noncompliance by July 2009. The SWRCB issued a draft order in December 2009, which provided for extending the schedule pending completion of the SWRCB proceedings. The SWRCB is expected to issue a final order in 2010.

Hydropower

Hyatt-Thermalito

On April 29, 2005, 14 of the 29 State Water Contractors brought suit against DWR. These contractors claimed the method used by DWR to allocate costs and revenue of its Hyatt and Thermalito Power Plants (Hyatt-Thermalito) at Lake Oroville violated the terms of long-term water supply contracts. (*Alameda County Flood Control & Water Conservation District, Zone 7 et al. v. State of California Department of Water Resources* (Sacramento County Superior Court, Case No. 05AS01775).) In December 2005, entities representing 13 other contractors intervened

in the lawsuit in opposition to the claims of the plaintiffs and in support of DWR's method of allocating costs and revenue. If the water contractors who filed the lawsuit are ultimately successful, this could result in contractors requiring the most pumping for delivery of their SWP water to pay more to DWR, while those contractors requiring less pumping would pay less.

The plaintiffs' motion to file an amended complaint adding causes of action for: (1) making the plaintiffs whole; (2) alleging defendants could not profit at the plaintiffs' expense; (3) breaching the agreement of good faith and fair dealing implicit with every contract; and (4) contending defendants received money which should have been paid to the plaintiffs, was granted on September 14, 2006. The plaintiffs have also expanded the list of desired remedies to include a court ordered trust, injunction, equitable lien, and attorney fees. In addition, the amended complaint joined two other State water contractors.

After a hearing on October 13, 2006, the court granted DWR's motion to bifurcate the case into two separate phases, i.e., liability and damages. The court has agreed to entertain motions for protective orders seeking to stay discovery on damages until conclusion of the liability phase. Pretrial discovery on the issues of contract interpretation and liability commenced in April 2007. Depositions of DWR employees were taken.

On December 19, 2007, DWR filed its motion for summary judgment and plaintiffs (*Kern County, et al.*) and intervenors (*Metropolitan Water District, et al.*) also filed motions for summary judgment. The hearing on the motions took place April 28, 2008. At the subsequent case management conference in May, the court confirmed its tentative ruling denying all of the parties' motion for summary judgment.

The trial on the liability phase started on November 5, 2008, and concluded on December 12. There were no closing arguments following the presentation of evidence; the parties would instead file post-trial briefs. The plaintiffs' post-trial brief was due on February 25, 2009, and DWR and the intervenors' post-trial briefs were due on April 24, 2009. DWR and the intervenors shared draft briefs in order to ensure a coordinated and effective response to the plaintiffs' arguments. May 26, 2009, was the deadline for the plaintiffs' response brief. The court had 90 days from the filing of the last brief to issue a decision.

On August 21, 2009, the Sacramento County Superior Court issued its tentative decision. The court found that DWR had properly allocated revenues from Hyatt power generation under the water supply contracts, and that the Northern California contractors will recover nothing from the lawsuit. The opinion also validated that it is within DWR's discretion to make water supply contract interpretations. On September 10, 2009, the judge signed an order affirming the tentative decision. A judgment was entered on October 30, 2009. The plaintiffs now claim that the order does not dispose of all the claims in the complaint. To resolve this, DWR and the intervenors will file a motion requesting an order from the court that the order does dispose of all the claims in the complaint and that there is no need to proceed with the damages phase of the lawsuit since DWR prevailed on contract interpretation.

Oroville Relicensing

DWR is engaged in a multiyear process to seek a new license from the Federal Energy Regulatory Commission (FERC) for its hydroelectric generation facilities at Oroville. The existing FERC license, which was granted in 1957, expired on January 31, 2007. DWR is using a collaborative approach to relicensing (Alternative Licensing Process or ALP) that involves working

cooperatively with federal and State resource agencies, Native American tribes, local public agencies, nongovernmental organizations, and other interested parties to achieve consensus on the FERC license and environmental documentation. DWR has reached agreements with many of these stakeholders on environmental and operational studies, project design, proposed improvements or modifications, environmental mitigation, and enhancement measures. DWR has also reached agreement with the federal agencies that have "mandatory conditioning authority" in the relicensing process. These are the U.S. Forest Service and Bureau of Land Management, with respect to the use of federal lands, and the USFWS and NOAA Fisheries, with respect to certain fishery issues. DWR must also obtain water quality certification from the SWRCB under Section 401 of the Clean Water Act.

DWR filed its application with FERC in 2005, and subsequently executed a settlement agreement with more than 50 parties, including DFW, the U.S. Department of the Interior, and NOAA Fisheries, on environmental and recreation resource issues. DWR filed the final settlement agreement with FERC on March 24, 2006. FERC's final environmental impact statement (EIS) was released on May 18, 2007, and a public hearing was held the following month in Oroville. DWR received comments on the draft environmental impact report (EIR) and is drafting responses to them. DWR also reached a tentative agreement with water districts for the Butte County rice growers and is negotiating a final agreement. The *Habitat Expansion Agreement for Central Valley Spring-Run Chinook Salmon and California Central Valley Steelhead* was executed, along with the supporting coordination agreement between DWR and Pacific Gas & Electric Company.

As the original license for the Oroville Facilities expired on January 31, 2007, FERC

issued an annual license on February 1, 2008, under the same terms and conditions. The annual license renews automatically each February 1 until FERC issues a new license.

Both Butte County and Plumas County have filed suit challenging DWR's approval of the EIR for the Oroville Facilities Relicensing. The counties claim that the EIR, findings, and mitigation and monitoring plan are not in accordance with requirements of the California Environmental Quality Act (CEQA), and request that the court vacate the approval.

Other Cases

The Monterey Amendment

Operational issues, along with financial and allocation matters, were a part of the Monterey Agreement, a 1994 pact between DWR and the SWP contractors that resulted in the biggest restructuring of water supply contracts since the first contracts were signed in the 1960s. Named for the city in which it was signed, the agreement contained 14 principles which addressed a number of issues, including delivery shortages that occurred during the 1987–1992 drought. The principles took the form of an amendment to the basic water supply contracts. Twenty-seven of the 29 SWP contractors signed the amendment during 1994 and 1995. Among other things, the amendment changed the methodology for allocating water among contractors, transferred 130,000 af of Table A amounts from agricultural contractors to urban contractors, shifted control of part of the Kern Water Bank from DWR to agricultural contractors, and changed the way Castaic Lake and Lake Perris reservoirs can be operated.

In 1995, the amendment was challenged by the Planning and Conservation League, Citizens Planning Association of Santa Barbara County, and an SWP contractor,

the Plumas County Flood Control and Water Conservation District. In 2000, a State appeals court agreed with the challengers that DWR should have been the lead agency on the EIR prepared for the amendment and that the EIR was inadequate because it did not analyze the potential for a permanent shortage. In 2003, a settlement was reached that called for preparation of a new EIR, more detailed reporting of the SWP's actual delivery capability, and public participation on any major amendments.

In 2007, DWR released a draft EIR on the *Monterey Amendment to the State Water Project Contracts (Including Kern Water Bank Transfer) and Associated Actions as Part of a Settlement Agreement*, which discusses the project alternatives, growth inducement, water supply reliability, and potential areas of controversy and concern.

In 2009, work continued on the final EIR.

East Branch Extension

On March 6, 2009, DWR certified a final EIR and approved the East Branch Extension Phase II project to install 6 miles of new large diameter pipeline, install a new pump station and reservoir, and enlarge the existing Crafton Hills Pump Station. The Phase II project is one of several related but distinct projects in the area designed to provide greater capacity for the delivery of SWP water.

Two nonprofit organizations, Cherry Valley Environmental Group and Cherry Valley Pass Acres and Neighbors, commented on the draft EIR during the public comment period and notified DWR of their intent to file a CEQA action shortly after the final EIR was certified. On April 8, 2009, DWR was served with a complaint alleging a broad range of CEQA violations, but the action does not specifically explain how the analysis or discussion of environmental impacts is insufficient (*Cherry Valley Environmental*

Group and Cherry Valley Pass Acres and Neighbors v. California Department of Water Resources, Superior Court of California, County of Riverside, Case No. RIC 523024). DWR has prepared and submitted the administrative record.

The case was moved to Yolo County Superior Court, and DWR's administrative record was filed with the court. At the December 3, 2009, case management conference, the judge expressed concerns about managing the case with Yolo's limited resources. He suggested the parties hire a retired judge. The case was set for a follow up case management conference on February 25, 2010.

Drought Water Bank

In 2009, DWR implemented the 2009 Drought Water Bank to transfer water from upstream of the Delta to areas in need of water. On February 27, 2009, the Governor issued a statewide emergency proclamation for the drought and ordered that emergency CEQA exemptions would apply for drought actions determined by the California Natural Resources Agency and the California Environmental Protection Agency to be consistent with the proclamation. DWR applied for and received a consistency determination from these agencies and filed a Notice of Exemption with the State Clearinghouse.

On April 24, 2009, an action was filed against DWR and others asserting the statutory standards and requirements for emergency exemptions under CEQA that are required for a Notice of Exemption. (*Butte Environmental Council; California Sportfishing Protection Alliance; and California Water Impact Network v. California Department of Water Resources; California Natural Resources Agency; Governor Arnold Schwarzenegger; and Does 1-50*, Alameda County Superior Court Case No. 09446708.) However, the Governor has the power to issue such an order under the

Emergency Services Act (Government Code Section 8567), as was done in this case.

In July, DWR provided documents for the administrative record to the Attorney General representing DWR. The petitioners have not filed for an injunction to stop the water transfers. A Motion to Dismiss has been filed based on the fact that the suit is now moot because the 2009 Drought Water Bank has ended. The court has yet to rule on the motion.

Breach of Contract Arbitration

State of California acting by and through the Department of Water Resources v. Whitaker Contractors, Inc., a California corporation; Whitaker Contractors, Inc. a California corporation v. State of California acting by and through the Department of Water Resources (OAH No. A-0031-07) is an arbitration case involving a breach of contract claim against Whitaker Contractors, Inc. (WCI).

The dispute arises out of a public works construction project known as the Tehachapi East Afterbay Completion Project, which is part of the SWP. The work encompassed in WCI's contract is an integral part of a larger project that will minimize on-peak power consumption for a series of large SWP pumping plants. WCI's contract work consisted of a bypass structure, flow barrier, control building, Alamo headworks improvements, and sitework. The work required precise scheduling of a 20-day suspension of water deliveries. The timing and short duration of the outage were critical to minimize risk of interrupted water deliveries to consumers. Throughout its performance of the contract, WCI repeatedly failed to perform work according to contract requirements (e.g., installation of noncompliant concrete) and failed to meet completion dates. DWR terminated WCI's contract for default. WCI has cross-complained for breach of contract, fraud, negligent misrepresentation, rescission,

quantum meruit, and unjust enrichment. An arbitrator has been selected by the parties, and this matter is in the initial stage of preparing for arbitration. Discovery, consisting of document requests, has commenced and is continuing. The arbitration hearing is expected to begin in early 2010.

Colorado River

Imperial Irrigation District v. All Interested Persons and eight related cases (Judicial Council Coordination Proceeding No. 4353, Sacramento County Superior Court) is a series of nine claims, which have been coordinated into a single proceeding before the Sacramento County Superior Court. These lawsuits challenge the Quantification Settlement Agreement (QSA) and associated actions taken to implement the QSA—a collection of 38 agreements that resolve disputes among water users in Southern California regarding their rights to California's shrinking share of Colorado River water.

The QSA facilitates California's plan to reduce its use of Colorado River water by settling disputes regarding priority and use. For example: (1) transferring conserved agricultural water from Imperial Irrigation District to San Diego County Water Agency for urban uses; (2) establishing water budgets for the parties; and (3) providing for mitigation of environmental impacts on the Salton Sea.

The primary issue is the constitutional debt limitation provision. The central constitutional argument—found in Article XVI, Section 6—is that the Legislature may not create a debt or liability exceeding \$300,000 without a two-thirds vote of the Legislature and a majority vote of the people.

One of the petitioners, Cuatro del Mar, asserts that the State's open-ended obligation for environmental mitigation costs violates the debt limitation provision. DWR

believes that, notwithstanding Article 9.2 of the Joint Powers Agreement, which states that the contracting parties may not rely on the Legislature's failure to appropriate funds as a defense, the Legislature must still appropriate funds and that until it does, the debt limitation violation is not ripe, because a contractual provision does not trump a legislatively required act. And no obligation can exist until money is actually appropriated.

On December 10, 2009, the Sacramento County Superior Court judge issued a tentative ruling in Phase 1A of the trial that the State's debt obligation to fund mitigation costs in the QSA violated the constitution's debt limitation provision. A final statement of decision will be rendered in early 2010.

Area of Origin

In July 2008, four SWP water supply contractors—Solano County Water Agency, Napa County Flood Control and Water Conservation District, City of Yuba City, and County of Butte—sued DWR claiming priority to delivery of SWP water and protections from water shortages based on area and watershed of origin statutes, and because they signed SWP water supply contracts. (*Solano County Water Agency, Napa County Flood Control and Water Conservation District, City of Yuba City, and County of Butte v. California Department of Water Resources, and Does 1–50*, Sacramento County Superior Court Case No. 34-2008-00016338.) Fourteen SWP contractors located south of the Delta and outside the area of origin have intervened.

The parties have completed substantial discovery and are in the pretrial motion stage.

Castaic Lake Water Agency

California Water Impact Network (CWIN) and the Friends of the Santa Clara River, both nonprofit environmental organizations, filed

a petition for writ of mandate against Castaic Lake Water Agency (Castaic Lake) in Ventura County. This petition for writ of mandate challenged Castaic Lake's approval of a project to store up to 24,000 af of allocated 2002 Table A water, in the Semitropic Groundwater Storage Program, before the end of 2004. As reported in Bulletin 132-06, the CEQA process followed by DWR and Castaic Lake was upheld by the 2nd District Court of Appeal and the time for appeal to the California Supreme Court has run out. The plaintiffs alleged the approval of the project violated CEQA, the Urban Water Management Planning Act, and the Public Trust Doctrine. The plaintiffs alleged that DWR should have been the lead agency in the preparation of an EIR. The Friends of the Santa Clara River had also filed a Reverse Validation Action in Sacramento County, which sought to set aside the agreement. Following the resolution of the CEQA case in Ventura County, plaintiffs filed a motion to dismiss the Sacramento case.

CWIN and the Planning and Conservation League also challenged a new EIR certified by Castaic Lake for the permanent transfer of 41,000 af of SWP Table A water to Castaic Lake from Kern County Water Agency (Kern) member unit, Wheeler Ridge-Maricopa Water District. These lawsuits were filed on January 24 and January 26, 2005. The original EIR, which was certified by Castaic Lake for this transaction, was successfully challenged in *Friends of the Santa Clara River v. Castaic Lake* on the grounds that it tiered off the decertified Monterey Agreement EIR. In response to the Los Angeles Superior Court's Order on remand in that case, Castaic Lake decertified its original EIR on December 27, 2002, and issued a Notice of Preparation for a new EIR on January 22, 2003. The new EIR, which does not tier off any of the Monterey Agreement EIR, was certified on December 23, 2004. DWR entered into contract amendments with both Castaic Lake and Kern, which implemented this transfer in 1999. DWR has been basing its SWP

allocations to Castaic Lake on the increased Table A amount.

DWR is primarily concerned with the CWIN and Planning and Conservation League arguments that: (1) DWR, and not Castaic Lake, should have been the lead agency under CEQA for this transaction, and (2) the EIR should tier off of the not-yet-complete Monterey Plus EIR. Other issues raised by CWIN and the Planning and Conservation League are that the EIR is inadequate under CEQA for a number of reasons, including violation of the Urban Water Management Planning Act and the Public Trust Doctrine, and it represents a prejudicial abuse of discretion.

The two cases were consolidated and a hearing on the merits was held on March 19, 2007. On May 22, 2007, the judge ruled in favor of Castaic Lake and the respondents in all but one aspect. The judge found that Castaic Lake could be the lead agency and did not have to wait for DWR to complete the Monterey Plus EIR to proceed. However, the judgement found that the 2004 EIR had one defect: it failed to show the analytic route as to how and why various allocations of SWP water are relevant and would occur. The judge required Castaic Lake to set aside its approval of the EIR and to comply with CEQA either through a new EIR or other environmental documentation, including an addendum. Plaintiffs have filed an appeal from the trial court decision. Castaic Lake has filed a cross-appeal. The parties have agreed to suspend actions on attorney fees until after a Court of Appeal decision.

Briefing was completed in 2008. On December 17, 2009, the 2nd District Court of Appeal ruled against the plaintiffs on all issues and upheld the adequacy of the EIR.

Environmental Review Acts

The National Environmental Policy Act (NEPA) (Title 42 United States Code Sections 4321–4347 [1970]) and the California Environmental Quality Act (CEQA) (California Public Resources Code Sections 21000–21177 [1970]) require government agencies to document and consider environmental consequences of their actions in their decision-making processes. NEPA states that it is the goal of the federal government to use all practicable means consistent with other considerations of national policy to protect and enhance the quality of the environment. All federal agencies must prepare an environmental impact statement (EIS), including a discussion of mitigation measures and alternatives, for federal actions that could significantly affect environmental quality.

CEQA is patterned after NEPA. Under CEQA, agencies are required to (1) disclose, through an environmental impact report (EIR), the significant impacts a proposed project would have on the environment, and (2) identify ways to reduce or avoid environmental damage.

CEQA applies to projects directly undertaken, funded, or approved by State or local agencies. NEPA applies to projects directly undertaken, funded, or approved by federal agencies. The Department of Water Resources conducts many projects in cooperation with federal agencies. In these cases, both CEQA and NEPA must be followed.

NEPA requires that mitigation measures and alternatives be disclosed to the public in the EIS, but it does not generally require federal agencies to adopt such mitigation measures or alternatives. CEQA does impose substantive duties on all California government agencies approving projects with significant environmental impacts to adopt alternatives or mitigation measures that they find to be feasible to substantially lessen these impacts, unless there are overriding reasons they cannot. When a project is subject to both CEQA and NEPA, both laws encourage agencies to cooperate in planning the project and preparing joint environmental documents.

The environmental review process allows citizens to learn about a proposed project and its potential significant effects and to participate in the decision-making process by providing feedback on agency information. The review process requires agencies to:

- describe the proposed project and the purpose or need for it;
- identify the lead and cooperating agencies involved in the project;
- invite interested parties to participate in the process;
- determine the scope of study with input from responsible agencies and the public;
- prepare and distribute a draft EIS or EIR;
- respond to comments received on the draft;
- prepare the final EIS or EIR;
- make findings and adopt feasible alternatives or mitigation measures to avoid significant effects, if applicable;
- adopt a monitoring plan to ensure compliance with mitigation measures; and
- prepare a list of permits required to implement the project if it is approved.

The scoping phase, which occurs early in the review process, is particularly important because it enables government agencies to identify issues and topics to be considered or addressed in the EIS or EIR.

Information gathered in the scoping phase helps agencies identify and evaluate reasonable alternatives, identify potential environmental impacts of the project, determine data and information needed, develop a work schedule, and allocate resources for preparing and distributing the draft environmental document for public review and comment.

NEPA requires a lead agency to involve the public during scoping, while CEQA does not. CEQA, however, does encourage public involvement, and agencies often opt to conduct activities that provide for wide public involvement. Members of the public may raise issues and identify additional alternatives, environmental effects, methods of assessment, and mitigation measures during the scoping phase and continue to participate in the review process for the draft environmental document. Thus, the CEQA process may lead to changes in a project through the development, consideration, and adoption of alternatives or enforceable mitigation measures to avoid or reduce any potential significant adverse effects on the environment.

If the project is approved, the lead agency publishes a document discussing all the factors considered in reaching its decision to proceed with the proposed action. It also discusses whether all practical means to avoid or minimize environmental harm have been adopted, and if not, the reasons they were not.



Chapter 7

Water Supply Development and Reliability

Waterways in the Sacramento-San Joaquin Delta.

Significant Events in 2009

The Department of Water Resources (DWR) implemented the 2009 Drought Water Bank (DWB) to purchase water from willing sellers and transfer it to areas experiencing severe water shortages due to drought conditions.

Pursuant to the Lower Yuba River Accord (Yuba Accord), DWR received 60,000 acre-feet (af) of water to help offset Delta export reductions for the protection and restoration of Delta fisheries. State Water Project (SWP) and Central Valley Project (CVP) contractors participating in the Yuba Accord received transfers of 120,000 af of Yuba dry year water to capture improvements in statewide water supply management. The amount of water received and transferred under the Yuba Accord totaled 180,000 af.

The SWP obtained federal and California Endangered Species Act (ESA and CESA) coverage through the December 2008 U.S. Fish and Wildlife Service (USFWS) biological opinion (BO) for delta smelt; the February 2009 Department of Fish and Game Incidental Take Permit for longfin smelt; and the June 2009 National Marine Fisheries Service (NOAA Fisheries) BO for salmon, steelhead, and green sturgeon.

Information in this chapter was contributed by the State Water Project Analysis Office, the Division of Integrated Regional Water Management, the Division of Statewide Integrated Water Management, and the Bay-Delta Office.

The Department of Water Resources (DWR) is working to improve the reliability of State Water Project (SWP) supplies and the long-term water contract annual Table A water allocations delivered to SWP water contractors. Staff is engaged in planning activities to develop additional water supplies and storage capacity.

Developing new water supplies and storage projects that are economically, environmentally, and technically sound, while satisfying institutional requirements and political concerns, presents significant challenges. Many concerns center on possible adverse effects that additional storage and delivery facilities may have locally and on the Sacramento-San Joaquin Delta. In the SWP conveyance system, the Delta is the critical link between water supplies in the Sacramento Valley and deliveries to the rest of the Central Valley and Southern California.

DWR works with the State and federal governments, local agencies, and public interest stakeholder groups to ensure water supply reliability now and in the future. To meet SWP water contractors' needs for sufficient water supplies, DWR is engaged in planning, developing, and providing local assistance with the objective of augmenting future SWP water supplies.

Supply Development and Reliability

Some of the activities DWR is engaged in to augment future SWP supplies include:

- implementing programs to transfer water, such as the Dry Year Water Purchase Program, the 2009 Drought Water Bank (DWB), and facilitating transfers between SWP long-term contractors and other agencies, including Central Valley Project (CVP) contractors;
- assisting with developing and implementing local and regional conjunctive use programs in the Sacramento Valley;
- constructing a groundwater monitoring network and a subsidence monitoring network to detect potential impacts caused by pumping associated with groundwater substitution transfers;
- managing the Feather River watershed above Lake Oroville to reduce sedimentation in the lake and preserve storage capacity; and
- investigating and evaluating storage projects.

Drought Water Bank

Due to extremely dry conditions in 2007 and 2008, the Governor issued Executive Order S-06-08 declaring a statewide drought and directing DWR to undertake a number of measures to address the impacts of the drought on California, including implementing a dry year water purchasing program in 2009. DWR established the 2009 DWB to purchase water from willing sellers and transfer it to areas experiencing severe water shortages due to drought conditions. The Governor issued a proclamation on February 27, 2009, declaring that the emergency exemptions in specific sections of the Public Resources Code relating to the California Environmental Quality Act (CEQA) apply to all actions related to the implementation of the DWB. A Notice of Exemption was filed with the State Clearinghouse on March 9, 2009. DWR also issued an addendum to the Environmental Water Account (EWA) environmental

impact report (EIR) describing the activities of the DWB. In April 2009, a suit was filed challenging the CEQA compliance for the 2009 DWB. A hearing is scheduled for January 2010. (For more information on the complaint, see Chapter 6, Legislation and Litigation.)

The Governor also requested emergency drought assistance under the Reclamation States Emergency Drought Relief Act of 1991. The Bureau of Reclamation (Reclamation) agreed to participate in the DWB and was the lead agency for compliance with the National Environmental Protection Act (NEPA). Reclamation prepared an environmental assessment and consulted with the U.S. Fish and Wildlife Service (USFWS) which issued a biological opinion (BO) for the DWB on April 14, 2009.

DWR executed agreements with 21 sellers in Northern California to provide up to 88,709 acre-feet (af) of water to the DWB through a combination of measures including crop idling, groundwater substitution, and reservoir releases. DWR executed twelve agreements with agencies seeking supplemental water supplies from the DWB, nine of which ultimately elected to receive water from the DWB. A total of 74,051 af of water was made available by the sellers, and after accounting for losses incurred to transport the water through and export the water from the Delta, a total of 57,245 af of water was delivered to the nine buyers' service areas.

See Chapter 9, Water Contracts and Deliveries, for more information related to specific DWB agreements.

Water Conveyance Through the SWP

DWR encourages and facilitates temporary transfers of water using SWP conveyance facilities for long-term SWP water contractors and other agencies to help

meet local, State, and environmental water supply needs. As a practical matter, SWP facilities are often needed to convey transfer water from the existing place of use to the place of use of the transferee. State law requires DWR to make unused SWP capacity available for transfers upon payment of fair compensation, provided that (1) no legal user of water will be injured; (2) there will be no unreasonable effect on fish, wildlife, or other instream beneficial uses; and (3) there will be no unreasonable effect on the overall economy or the environment of the county from which the water is being transferred (California Water Code [CWC] Section 1810). Water transfers can involve transfers and exchanges among SWP long-term water contractors, between SWP water contractors and non-SWP entities, or between two or more non-SWP entities.

For information regarding specific transfers or exchanges, please see Chapter 9, Water Contracts and Deliveries.

Transfer and Exchange Evaluations

An important element of any water transfer is determining what quantity of water, if any, is transferable.

The transferability of water depends on many factors including the source of the water being transferred, what is being done to make water available, when the water can be made available, and the type of water right the existing user holds. Several CWC provisions authorize temporary transfers of water rights issued by the State Water Resources Control Board (SWRCB) and put conditions on those transfers to protect those not involved in them. Short-term transfers, of less than one year, are authorized under Sections 1725–1732. Long-term transfers, for periods greater than one year, are authorized by Sections 1735–1737. Other CWC sections specify conditions under which water can be transferred and legal protections for those transferring water.

The CWC sections noted above contain provisions intended to protect other legal users of water and fish and wildlife from the possible adverse effects of a water transfer. These provisions reflect the concept that changes can be made to the authorized place and purpose of use or point of diversion of a water supply as long as there is no injury to others as a result of the change (the “no injury rule”). The no injury rule in State water law is intended to protect other water right holders from a water user’s expansion of water use beyond what would have been used by the water rights holder in the absence of the transfer. Hence, under the no injury rule, only “new water” is transferable (i.e., water added to the downstream water supply only as a result of the transfer). To protect other users, a transfer would not be authorized to the extent that it would reduce the amount or timing of water that would have been available to downstream users, regardless of the water priority of those users.

CWC Section 1810(d) requires DWR to consider potential impacts of a transfer to legal users, instream uses, and to the economy of the area from which the water would be transferred. DWR must determine whether to allow use of any surplus water conveyance capacity for a transfer. DWR reviews each request to transfer water through SWP facilities to assure that only new water will be transferred.

Transfer water is typically developed through four methods: surplus water released from storage facilities, substitution of groundwater for transferred surface water, idling agricultural land, and undertaking conservation activities that develop new water. Transfers may result in direct impacts and third-party impacts (on parties not involved in the transfer). Certain CWC provisions were enacted to limit potential impacts. For example, additional groundwater pumping from a groundwater substitution program can

potentially affect other groundwater users in the area. CWC Section 1745.10 generally requires that transfers of surface water in which groundwater will be pumped to make up for the transferred surface water: (1) be consistent with a groundwater management plan adopted pursuant to State law for the affected area, or (2) do not create or contribute to conditions of long-term overdraft in the affected groundwater basin.

Injury can also occur due to stream depletion induced by pumping wells near a stream. The amount of water depleted from the stream as a result of the increased pumping must be deducted from the amount of water transferred or the groundwater pumping is not truly an addition to the surface water supply, and the net surface water flows will not increase as assumed. Consequently, to evaluate possible impacts from groundwater substitution transfers, DWR requires that users proposing to transfer water through groundwater substitution provide the information required to estimate the effects on the surface water system. Each type of transfer has its own set of potential impacts that must be evaluated to protect parties not involved in the transfer.

With the exception of short-term transfers done under CWC Section 1725, which provides for an expedited process for water rights issued by the SWRCB, water transfers are subject to compliance with CEQA and, possibly, NEPA. The CEQA/NEPA and SWRCB processes provide opportunities for public review and comment on water transfer proposals.

Staff in the State Water Project Analysis Office, Division of Operations and Maintenance, Division of Integrated Regional Water Management, and the Office of the Chief Counsel evaluate proposed water transfers to determine whether they will impact the SWP, other water users, the environment, or the area from which the water will be transferred.

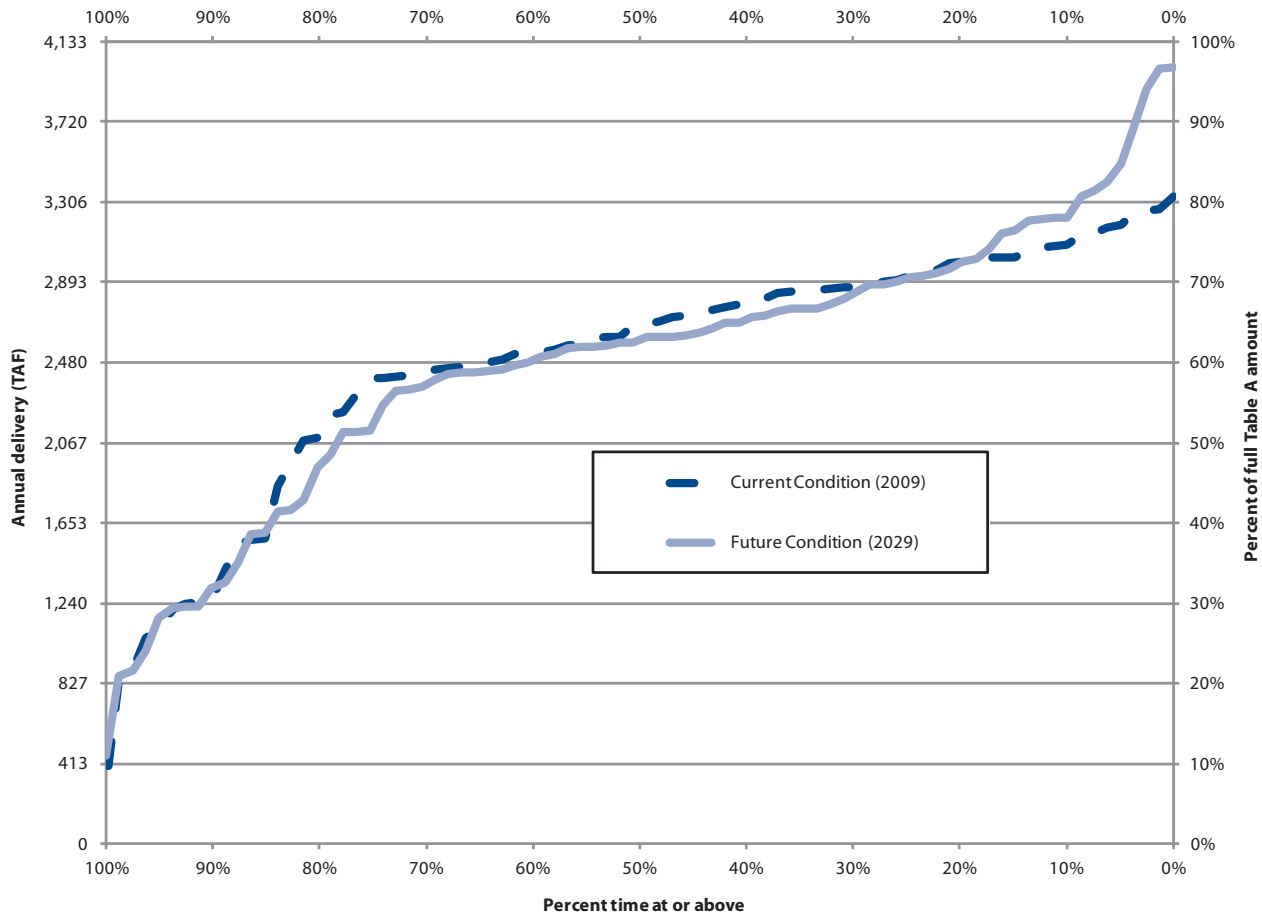


Figure 7-1 SWP Table A Water Delivery Probability for Years 2009 and 2029

SWP Delivery Reliability Report

To assist local agencies assessing their overall water supplies, DWR provided current data on the SWP's ability to deliver water under 2009 conditions and for projected conditions in a report entitled the *Draft State Water Project Delivery Reliability Report 2009*. The 2009 report will be finalized in August 2010, and the next draft update of this biennial report is expected in 2011.

Delivery reliability depends on three factors: the availability of water at the source, the ability to convey water from the source to the desired point of delivery, and the level of demand. Information in the *Draft State Water Project Delivery Reliability Report 2009*

for projected conditions accounts for the forecast effects of climate change. In addition, the analysis of the ability to convey water from the source to the point of delivery assumes only SWP facilities and permits existing in 2009. In order to provide a conservative estimate of water delivery reliability, no planned facility improvements to the SWP are assumed. Lastly, the level of demand for SWP water, the amount, and the pattern of demand, were derived from historical data and information received from SWP water contractors.

Figure 7-1 shows the probability that a given amount of SWP annual Table A water will be delivered from the Delta for conditions in 2009 and projected to exist in 2029.

The following can be deduced for year 2029 conditions:

- In 75 percent of the years, annual SWP Table A water delivery is estimated to be at or above 2.14 million acre-feet (maf) per year (52 percent of 4.13 maf).
- In 50 percent of the years, delivery is estimated to be at or above 2.60 maf per year (63 percent of 4.13 maf).
- In 25 percent of the years, delivery is estimated to be at or above 2.92 maf per year (71 percent of 4.13 maf).

Detailed information on the assumptions, data, and results of additional studies, as well as the other scenarios for annual Table A amounts, can be found in the reliability report referenced above.

SWP Future Water Supply Program

The Future Water Supply (FWS) Program coordinates DWR's efforts to implement the Sacramento Valley Water Management Program (SVWMP), provides technical support within DWR for the Lower Yuba River Accord (Yuba Accord), and monitors and assesses conditions of the Sacramento Valley groundwater basin that affect the yield of the SWP. The FWS Program's goal is to determine the effects of Sacramento Valley groundwater management activities, including water transfers, on SWP water supply reliability, and recommend actions to improve or maintain that reliability.

The FWS Program's Upper Feather River watershed management component evaluates the state of the Feather River watershed above Lake Oroville and actions being planned or implemented within the watershed to increase base-flow runoff, attenuate flood flows, and reduce sedimentation. Activities included collaborating with local stakeholders on watershed restoration activities; installing

monitoring equipment; and gathering pertinent data on stream flows, water quality, erosion, land use, and environmental effects. In 2009, efforts focused on methods to evaluate the cumulative hydrologic effects of larger, landscape-scale plug and pond meadow restoration projects. The work continued to receive strong local support.

Sacramento Valley Water Management Program

The precursor to the current FWS Program was DWR's work to incorporate conjunctive-use projects into the SWP within the Sacramento Valley to increase SWP dry year yield. Similar projects were proposed to be implemented as part of the Sacramento Valley Water Management Agreement (SVWMA) which was signed by stakeholders in early 2003. The SVWMA, which led to the development of the SVWMP, established a process by which federal, State, and local parties would collaborate in the development and implementation of water management projects intended to increase the availability of Sacramento Valley water resources. For more information on issues surrounding the SVWMA, see Bulletins 132-02, 132-03, and 132-04, available on DWR's website.

In 2009, DWR, in partnership with Reclamation and other members of the SVWMA Management Committee, continued efforts to develop the programmatic environmental impact statement (EIS)/EIR required for implementation of the SVWMP. The intent of this Reclamation funded and lead effort was to develop a programmatic EIS/EIR to support the short-term SVWMP work plan (projects defined as those that could be implemented in the next 1 to 2 years). Many stakeholders continued to be frustrated by the lack of progress on the programmatic EIS/EIR, which had been stalled for multiple reasons.

Progress was elusive partly because baseline assumptions required to develop the environmental documents were not finalized due to unsettled issues relating to the Delta, especially those regarding the water projects' Operations Criteria and Plan and the associated unreleased BOs. Additionally, Reclamation suspended work on the programmatic EIS/EIR from August through November due to funding constraints. Development of the EIS/EIR was also hindered because participants could not identify a source of funding for the peer review of the groundwater model to be used in the development of the EIS/EIR. This peer review came at the request of the SVWMA Management Committee based on a December 2008 meeting.

DWR continued to develop monitoring facilities and collect and manage hydrologic data that is required to implement the SVWMP. Staff planned and supervised the construction of multiple-completion wells funded by Proposition 50 and the SWP near several proposed SVWMP projects in Glenn and Sutter counties.

SWP Water Rights Activities

Water Right Permits

SWP operations are governed by the terms and conditions contained in DWR's water right permits and licenses along with other State and federal regulatory restrictions, including BOs for the protection of endangered species. DWR currently holds water right permits for the operation of the SWP and upper Feather River facilities, some of which specifically authorize SWP operations at the Oroville and Delta facilities, including the North Bay Aqueduct, for water supply purposes. Each permit specifies the authorized quantities of direct diversion and diversion to storage, place of use, and time within which the permitted quantities must be put to beneficial use. A change in any of the terms and conditions contained in the

water right permits and licenses, including a change in the place or purpose of use or point of diversion, requires SWRCB approval.

Diversion and use of SWP water throughout the SWP service area has increased since initial operations in the 1960s. However, due to a number of factors, including operational and regulatory constraints, the beneficial use of water has not yet reached the maximum quantities anticipated for full development of the SWP.

Two petitions for change were submitted to the SWRCB in 2009. DWR and Reclamation filed a joint petition for change on March 20, 2009, to consolidate the SWP and CVP authorized places of use in order to facilitate transfers and exchanges of SWP and CVP water. The Governor's drought proclamation directed DWR and the SWRCB to facilitate and expedite water transfers. The consolidation of the SWP and CVP places of use provided the two projects with the operational flexibility to manage the available SWP and CVP supply as efficiently as possible. The SWRCB issued Order WR 2009-0033 approving the petition on May 19, 2009. The change facilitated the delivery of water obtained through the DWB as well as a number of exchanges between the SWP and CVP and their respective contractors. A total of 108,768 af of water was transferred under the provisions of the change petition.

DWR filed a petition for temporary change on January 16, 2009, to allow the transfer of up to 8,000 af of SWP water from the Tulare Lake Basin Water Storage District (Tulare) service area to land within Westlands Water District (Westlands). Two landowners with acreage in both Tulare and Westlands requested the change to allow the delivery of a portion of their SWP supply to land in Westlands. The SWRCB issued Order WR 2009-0026-DWR approving the change on April 3, 2009. A total of 2,100 af was transferred.

For more information about specific agreements relating to each of the transfers, see Chapter 9, Water Contracts and Deliveries.

Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary

The Delta and Suisun Marsh are located where California's two major river systems, the Sacramento and San Joaquin, converge to flow westward to meet incoming seawater tides flowing through the San Francisco Bay. The watershed of the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Bay-Delta Estuary) is a critical source of water supply for much of California. The watershed is a source of drinking water for two-thirds of the State's population; it supplies some of the State's most productive agricultural areas; and it provides water for fish, wildlife, and other public trust uses of water within and upstream of the estuary.

Water originating in the Bay-Delta watershed is delivered to areas within the watershed and to areas south and west of the estuary. The largest water distribution systems that release stored water into the Delta and directly divert water from the Delta are the SWP, operated by DWR, and the federal CVP, operated by Reclamation. Numerous other water storage and diversion projects influence Bay-Delta Estuary inflows, outflows, water quality, and other hydrologic characteristics.

The SWRCB regulates both the quality of water in the Bay-Delta Estuary and the diversion and use of water released into and diverted from the estuary for water supply. The SWRCB coordinates its regulatory authorities under State laws governing water quality and water rights, ensuring that water quality is protected for all beneficial uses when water is diverted from the estuary.

Under its authority to protect beneficial uses of water, SWRCB adopted the 2006 *Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary* (WQCP) on December 13, 2006 (Resolution No. 2006-0098). The WQCP contains objectives for flow, salinity, dissolved oxygen levels, and other parameters necessary for protection of various beneficial uses such as municipal and industrial, agricultural, and fish and wildlife. The SWRCB implements these objectives in part or in whole, depending on the circumstances, through conditions on water right permits and licenses. In 1999, the SWRCB adopted Water Right Decision 1641 (later modified by Order WR 2000-02) modifying the terms and conditions of a number of water rights permits and licenses, primarily those for the SWP and CVP, to implement the objectives of the 1995 WQCP.

For more information about the SWRCB, see Chapter 4, Water Quality Programs.

SWRCB Bay-Delta Proceedings—2009 Activities

In 2009, SWRCB proceedings examined a number of issues in the Bay-Delta Estuary relating to water quality, protection of beneficial use for agriculture and fish and wildlife, and salinity issues, among others, which have the potential to affect Delta water supply and reliability.

Pelagic Organism Decline

Although the SWRCB did not convene any workshops related to pelagic organism decline in 2009, the pelagic organism decline management team continued with their studies through the Interagency Ecological Program.

For more information on pelagic organism decline, see Chapter 3, Environmental Programs.

Strategic Workplan for the Bay-Delta Estuary

On July 16, 2008, the SWRCB adopted the *Strategic Workplan for Activities in the San Francisco Bay/Sacramento-San Joaquin Delta Estuary* (workplan). Although the workplan contains many water quality related elements, two of these elements are specifically related to water quality control planning efforts: (1) a review of southern Delta salinity and San Joaquin River flow objectives to protect water supply for agricultural beneficial use, and (2) a comprehensive review of the 2006 WQCP and its implementation through water rights and other requirements to protect fish and wildlife beneficial uses and the public trust.

According to the workplan, the SWRCB anticipates that it will consider adopting draft changes to the 2006 WQCP by December 2011. The timeline may change as a result of changes to the Bay Delta Conservation Plan timeline or other issues. The workplan was updated throughout 2009.

2006 Bay-Delta Plan Review

Water Code Section 13240 requires that the WQCP be periodically reviewed. Federal Clean Water Act Section 303(c) (33 U.S.C. Section 1313(c)) requires a triennial review of State water quality “standards,” as defined in the act. A workshop on October 8, 2008, formally began a review of the 2006 WQCP.

The WQCP review and amendment process will consist of review of the 2006 WQCP to identify elements that may need amendment or new elements that may need to be added, staff preparation of any amendments or revision of the entire WQCP, and SWRCB adoption of some or all of the amendments or revisions. SWRCB information-gathering activities may affect the scope of the WQCP review and may include a series of evidentiary hearings on a number of critical issues concerning the Delta’s ecology. The

Bay Delta Conservation Plan environmental review may include some of the analyses needed for the comprehensive WQCP review.

Pursuant to its strategic workplan, the SWRCB has already initiated a separate, but parallel, process to review two specific elements of the 2006 WQCP: the southern Sacramento-San Joaquin Delta salinity objectives and the San Joaquin River flow objectives. The SWRCB held workshops in April, June, and August 2009 to receive information and conduct detailed discussions regarding potential amendment or revision of these objectives. The August workshop focused on salt tolerance of crops in the southern Delta.

Southern Delta Salinity and San Joaquin River Flow Objectives. On April 22, 2009, the SWRCB convened a staff workshop to receive information and conduct detailed discussions regarding potential amendments or revisions to the southern Delta salinity and San Joaquin River flow objectives included in the 2006 WQCP. The agenda for the workshop focused solely on issues and information needs related to the proposed modeling alternatives for the salinity and flow objectives. Some related questions were discussed including: (1) whether use of a fixed percentage of unimpaired flows at Vernalis is a reasonable approach; (2) appropriate monthly average electrical conductivity at various locations; and (3) whether there are a sufficiently broad range of alternatives.

The SWRCB will use this information to define and more narrowly focus the scope of subsequent workshops on issues relating to San Joaquin River flow objectives.

On August 13, 2009, the SWRCB convened a workshop to discuss issues related to the southern Delta agricultural salinity objectives. The SWRCB consultant presented a draft paper on salt tolerance of crops in the southern Sacramento-San Joaquin Delta.

The paper is expected to be finalized by January 2010.

For more information about salinity objectives and compliance monitoring in the South Delta, see Chapter 4, Water Quality Programs.

CALFED Bay-Delta Program Storage Program

DWR is the State lead agency for the Storage Program, which consists of surface storage studies and groundwater programs and projects.

The Storage Program is a comprehensive program with potential benefit for the SWP consisting of actions related to surface and groundwater storage. The Division of Statewide Integrated Water Management and the Division of Integrated Regional Water Management have been working with CALFED agencies to enhance storage and conjunctive-use programs that support local project development via loans and grants. The Storage Program is part of an ongoing evaluation of how storage, both groundwater conjunctive use and surface storage, can help meet California's urban, agricultural, and environmental water supply reliability, ecosystem restoration, and water quality needs.

Surface Storage Investigations

Surface storage investigations are developing environmental documentation and feasibility studies for four of the five surface storage projects identified for further study in the CALFED record of decision.

In-Delta Storage Program. The In-Delta Storage Program may provide capacity to store approximately 217,000 af of water in the South Delta for a wide array of water supply, water quality, and ecosystem benefits. The project would include two

storage islands (Webb Tract and Bacon Island) and two habitat islands (Holland Tract and Bouldin Island).

In 2007, further study of the In-Delta Storage Program was suspended, and no further work was done on the project in 2009.

Los Vaqueros Reservoir Expansion Project.

Contra Costa Water District (Contra Costa) owns and operates the 100,000 af Los Vaqueros Reservoir just southwest of the Sacramento-San Joaquin Delta. The Los Vaqueros Reservoir Expansion Project involves analysis of increasing reservoir storage by as much as 175,000 af, for a potential storage capacity up to 275,000 af.

The project objectives are to: (1) develop water supplies for environmental water management; (2) increase water supply reliability within the San Francisco Bay Area; and (3) to the extent possible, improve the quality of water deliveries to municipal and industrial customers without impairing the project's ability to meet the first two objectives.

In 2009, Contra Costa released a public draft EIS/EIR for expansion alternatives of the dam and reservoir to increase storage up to 275,000 af. Contra Costa is the lead agency under CEQA and, in coordination with Reclamation and DWR, will continue with the feasibility study and environmental documentation.

Shasta Lake Water Resources Investigation.

Reclamation, in coordination with other agencies, is conducting a feasibility study of expanding Shasta Dam and Reservoir, primarily to promote increased survival of anadromous fish populations in the upper Sacramento River and to increase water supply reliability. An enlargement of Shasta Dam would inundate additional lands around the existing reservoir and affect a portion of the McCloud River. California Public Resources Code Section 5093.542(c),

CALFED Bay-Delta Program

The San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Bay-Delta Estuary) is the largest estuary on the West Coast. It is a maze of tributaries, sloughs, and islands, and a haven for more than 750 plant and wildlife species. It is also the hub of California's two largest water distribution systems—the Central Valley Project (CVP), operated by the Bureau of Reclamation, and the State Water Project (SWP), operated by the Department of Water Resources. Together, these water development projects can divert a significant portion of the inflow to the Delta, depending on annual hydrology, water supply demands, and other factors. The Bay-Delta system is extremely complex. Project exports, other diversions, invasive species, salinity intrusion, and discharges from upstream and in-Delta sources are some of the various components that have had serious impacts on water supply, water quality, and fish and wildlife resources in the Bay-Delta Estuary. The estuary is important both as a reliable source of water and critical fish and wildlife habitat. Resolution of the conflicts regarding methods of management, conservation, increasing system capacity, and protecting the region's ecology require a coordinated collaborative approach.

In June 1994, in a quest for solutions to the resource problems in the Bay-Delta, State and federal agencies signed an agreement to: (1) coordinate their actions to meet water quality standards to protect the Bay-Delta Estuary; (2) coordinate the operation of the SWP and the CVP more closely with recent environmental mandates; and (3) develop a process to establish a long-term Bay-Delta solution to address four categories of problems—ecosystem quality, water quality, water supply reliability, and levee system vulnerability. This agreement, *Principles for Agreement on Bay-Delta Standards between the State of California and the Federal Government* (Bay-Delta Accord) signed in December 1994 by both parties, detailed interim measures for both environmental protection and regulatory stability.

The CALFED Bay-Delta Program mission is to develop and implement a long-term comprehensive plan to restore ecological health and improve water management for beneficial uses of the Bay-Delta.

It is envisioned as a 30-year plan, implemented through 11 major program elements.

The Bay-Delta Accord laid the foundation for the CALFED Bay-Delta Program, which began in May 1995. The *CALFED Bay-Delta Program, Final Programmatic Environmental Impact Statement/Environmental Impact Report* was released in July 2000, followed by the *Programmatic Record of Decision* in August 2000.

The California Bay-Delta Act of 2003 established the California Bay-Delta Authority as the new governance structure and charged it with providing accountability, ensuring balanced implementation, tracking and assessing CALFED Bay-Delta Program progress, using sound science, assuring public involvement and outreach, and coordinating and integrating related government programs.

the Wild and Scenic Rivers Act, states that, “except for participation by the DWR in studies involving the technical and economic feasibility of enlargement of Shasta Dam, no department or agency of the state shall assist or cooperate with, whether by loan, grant, license, or otherwise, any agency of the federal, state, or local government in the planning or construction of any dam, reservoir, diversion, or impoundment facility that could have an adverse effect on the free-flowing condition of the McCloud River, or on its wild trout fishery.”

The State budget does not include funding for DWR to continue participating in this study. However, Reclamation’s planning is ongoing.

North-of-the-Delta Offstream Storage Investigation. DWR and Reclamation are working in partnership with local, State, and federal agencies to further study north-of-the-Delta offstream storage opportunities. The North-of-the-Delta Offstream Storage Investigation focuses on potential projects on the west side of the Sacramento Valley, including Sites Reservoir.

Storing water in offstream reservoirs during excess flow periods could provide opportunities to increase water storage in an environmentally sensitive manner. The stored water could then be made available to enhance water management flexibility in the Sacramento Valley and the Bay-Delta Estuary, reducing water diversions on the Sacramento River during critical fish migration periods, increasing the reliability of supplies for the Sacramento Valley and statewide, and providing storage and operational flexibility to support environmental enhancement actions and adapt to climate change.

North-of-the-Delta Offstream Storage Investigation studies were ongoing in 2009.

Upper San Joaquin River Basin Storage Investigation. DWR and Reclamation, in coordination with other State and federal agencies, are evaluating opportunities for increased storage in the upper San Joaquin River watershed. The objectives of the Upper San Joaquin River Basin Storage Investigation are to: (1) increase water supply reliability and operational flexibility in the Friant Division, other San Joaquin Valley areas, and other regions, and (2) enhance water temperature and flow conditions in the San Joaquin River in support of San Joaquin River restoration efforts. Other opportunities include additional hydropower generation, reduction of flood damages, water quality improvements, and recreation site development.

In May 2009, Reclamation and DWR released a plan formulation report for the Upper San Joaquin River Basin Storage Investigation that describes the alternative formulation, evaluation, and comparison activities that led to selection of Temperance Flat RM 274 Reservoir for detailed feasibility-level evaluation. The report describes the progress of the study to date and includes additional information on the economics, operations, and costs of Upper San Joaquin River Basin Storage Investigation alternatives. It also defines a set of alternative plans to be considered in the study’s feasibility report and EIS/EIR.

Conveyance Program

The Conveyance Program consists of projects proposed in the North and South Delta. These projects are discussed briefly below; for more information about the North and South Delta, see Chapter 2, Delta Resources.

North Delta

The North Delta Program is composed of studies related to a through-Delta facility, Delta Cross Channel reoperation,

a flow-control facility in the Franks Tract region, and a project to improve flood management and the ecosystem along the Mokelumne River.

The SWP obtained federal and California Endangered Species Act (ESA and CESA) coverage through the December 2008 USFWS BO for delta smelt; the February 2009 Department of Fish and Game Incidental Take Permit for longfin smelt; and the June 2009 National Marine Fisheries Service (NOAA Fisheries) BO for salmon, steelhead, and green sturgeon. The new BO and incidental take permits were necessary due to the addition of the newly listed green sturgeon. Many of the regulatory requirements will require studies and projects.

In 2009, work on several projects was suspended as a result of the State's fiscal crisis. The Delta Regional Salmon Outmigration Study, undertaken as part of the Delta Cross Channel evaluation to address fishery and water quality concerns, was unable to complete the last phase of its field study and subsequent data analysis.

The EIS/EIR for the Franks Tract Project, which involves installation of one or more operable barriers in river channels around the Franks Tract region to reduce sea water intrusion and enhance conditions for sensitive fish species, was also suspended. However, Reclamation completed the North Central Delta Improvement Study and associated Initial Alternatives Information Report. In addition, Reclamation initiated work on the plan formulation report and the feasibility study for the project. DWR staff completed preparation of the Franks Tract Project Scoping Report and initial economic analysis identifying the potential benefits of the project.

With the North Delta Flood Control and Ecosystem Restoration Project, solutions to improve flood management and

the ecosystem are being considered, including setback levees, detention basins, dredging, and levee degradation for floodplain expansion.

Scientific and engineering studies continued in 2009.

South Delta

Actions in the South Delta include the South Delta Improvements Program (SDIP), implementing flood control/ecosystem improvements in the lower San Joaquin River, an intertie between the SWP California Aqueduct and the CVP Delta-Mendota Canal, and continuation of DWR's Temporary Barriers Program.

SDIP is a two-stage project. Stage 1 proposes to reduce the movement of San Joaquin River watershed Central Valley fall-run and late fall-run juvenile Chinook salmon into the South Delta via Old River and to maintain adequate water levels and water quality for agricultural diversions in the South Delta. Stage 2 would increase water deliveries and delivery reliability to SWP and CVP contractors south of the Delta and increase the maximum permitted level of diversion through the existing intake gates at Clifton Court Forebay.

The SDIP Final EIR/EIS (2006) evaluated alternatives and proposed proceeding with SDIP Stage 1. This component involves constructing permanent operable gates and channel dredging in the South Delta. DWR is proposing installation of these permanent gates to replace temporary structures currently installed and removed each year under DWR's Temporary Barriers Program.

In 2007 and 2008, Reclamation and DWR developed a project description and the biological assessment for the SWP and CVP Operations Criteria and Plan that included operation of the SDIP permanent operable gates. The biological assessment was

completed in 2008; however, other planning and permitting efforts were either slowed or suspended, and permitting could not move forward pending release of Operations Criteria and Plan BOs.

The USFWS issued a BO in December 2008 in which it concluded the coordinated operations of the CVP and SWP would jeopardize delta smelt. The USFWS provided a reasonable and prudent alternative under which SDIP could move forward.

NOAA Fisheries issued a BO in June 2009 which concluded that CVP and SWP operations would jeopardize a number of anadromous species, in particular Chinook salmon. NOAA Fisheries provided no reasonable and prudent alternative for SDIP. DWR initiated discussion with NOAA Fisheries in late 2009 to establish what actions could lead to a reasonable and prudent alternative under which SDIP could move forward. Further planning and permitting efforts continued to be slowed or suspended during 2009.

Any action regarding SDIP Stage 2 will require further study and public input. Stage 2 planning continued to be suspended in 2009.

Environmental Water Account

The Environmental Water Account (EWA) was established in the CALFED Bay-Delta Program (CALFED) programmatic EIS/EIR Record of Decision. A cooperatively managed program, the EWA provides protection to the fish of the Bay-Delta Estuary through environmentally beneficial changes and increased flexibility in SWP and CVP coordinated operations while maintaining water supply reliability for SWP and CVP users.

Under EWA, development of various water asset options, such as water banking, borrowing, transfers, and conveyance

arrangements, allows stream flow and Delta outflow augmentation for fishery protection, restoration, and recovery. The EWA's water assets include SWP and CVP water export modifications during critical stages of fish life cycles and water supply replacement due to pumping reductions in the Delta.

Responsibility for implementing EWA resides with the following five State and federal agencies (EWA agencies): NOAA Fisheries, USFWS, and the Department of Fish and Wildlife (DFW) (the management agencies) and Reclamation and DWR (the project agencies).

The *Environmental Water Account Operating Principles Agreement* was originally executed between the five EWA agencies in 2000. In 2004, the agreement was extended through December 31, 2007. No further extensions of the EWA occurred beyond 2007; however, federal authorization continues through 2014.

In 2008, the five EWA agencies released the Final Supplemental EIS/EIR evaluating the effects associated with extending EWA operations through 2011. However, in late 2008, DWR and Reclamation, lead agencies for the EIS/EIR, suspended work on the longer-term EWA program.

DWR has not purchased any water for the EWA since executing the Lower Yuba River Accord Water Purchase Agreement in 2007. However, for fishery purposes, prepaid annual water deliveries to DWR totaling 60,000 af will continue through 2015, consistent with past EWA operations.

For more details on EWA deliveries, see Chapter 9, Water Contracts and Deliveries.

Lower Yuba River Accord

The Lower Yuba River Accord's (Yuba Accord) purpose is to resolve instream flow issues and protect and enhance lower

Yuba River fisheries and local water supply reliability. The Yuba Accord provides revenues for local flood control and water supply projects; water to enhance SWP and CVP water supply reliability by offsetting Delta export reductions for protection and restoration of Delta fisheries; and improvements in statewide water supply management, including dry year supplies for participating SWP and CVP contractors.

The Yuba Accord is based upon three agreements as follows:

- a water purchase agreement with DWR, including water to help offset Delta export reductions and dry year water for participating SWP and CVP contractors;
- conjunctive use agreements with Yuba County Water Agency member units; and
- a fisheries agreement.

The three Yuba Accord agreements were executed in late 2007 and early 2008, and the SWRCB approved the Yuba Accord in March 2008, setting flow schedules for the Yuba River and authorizing accord-based water transfers through 2015.

The water purchase agreement transfers water to help offset Delta export reductions annually, and provides dry year transfer water for SWP and CVP contractors from surface and groundwater substitution sources.

DWR has executed 22 agreements under the Yuba Accord for dry year supplies with participating SWP and CVP contractors. In 2008 and 2009, a total of 166,086 af and 180,000 af, respectively, was transferred to DWR and participating SWP and CVP contractors.

For additional details on Yuba Accord deliveries, see Chapter 9, Water Contracts and Deliveries.



Chapter 8

Water Supply

Lake Perris.

Significant Events in 2009

Water year 2008–2009 proved to be a dry year, with less than average precipitation and mountain snowpack. The State received precipitation at 81 percent of average in 2008–2009, compared to 78 percent of average in 2007–2008. Though a below-average year, the Northern Sierra 8-Station Precipitation Index recorded its fourteenth wettest May in 115 years. Approximately 25 percent of the water year precipitation in the Northern Sierra 8-Station Precipitation Index was due to two storms in February. The statewide snowpack peaked at 88 percent of its April 1 average in late March.

Statewide river runoff totaled 65 percent of average in the 2008–2009 water year. Runoff in the Sacramento River Region, San Joaquin River Region, and Tulare Lake Region was 70, 81, and 71 percent of average, respectively. In the prior water year (2007–2008), runoff for these three regions totaled 55, 56, and 69 percent of average. In the 2008–2009 water year, Feather River runoff totaled 68 percent of average.

The Sacramento Valley Water Year Hydrologic Classification (Sacramento Valley 40-30-30 Index) and the San Joaquin Valley Water Year Hydrologic Classification (San Joaquin Valley 60-20-20 Index) were “dry” and “below normal,” respectively, based on observed data for water year 2008–2009.

Information in this chapter was contributed by the Division of Flood Management and the Division of Operations and Maintenance.

The Department of Water Resources (DWR) monitors precipitation, calculates runoff, and operates storage facilities during each water year. The official California water year runs from October 1 through September 30. DWR works during the water year to fulfill its key contractual obligations to the State Water Project (SWP) long-term water supply contractors.

Water Year 2008–2009

Precipitation and Snowpack

California experienced less than average rainfall and mountain snowpack during water year 2008–2009. Figure 8-1 presents water year precipitation for the various regions of the State. The State received precipitation at 81 percent of average in 2008–2009, compared to 78 percent of average in 2007–2008. The Northern Sierra 8-Station Precipitation Index (see sidebar, Precipitation and Water Supply Indices) finished the water year with 46.85 inches of precipitation, which was 93 percent of average. The statewide average snow water equivalent, based on snow sensors, reported for April 1 was 23.7 inches, or 82 percent of average. The 2008–2009 water year snow accumulation peaked at 25.2 inches on March 25.

Table 8-1 presents monthly precipitation totals for water year 2008–2009 at various gages located throughout the State, listed north to south. In general, the two wettest months were February and March. San Francisco Weather Bureau Airport reached 241 percent of average precipitation (7.92 inches) in the month of February. Mount Shasta City in far northern California peaked at 205 percent of average precipitation (9.0 inches) in the month of March. For the water year, Mount Shasta City received a total of 38.73 inches of precipitation, which is 107 percent of average. Yosemite Headquarters received a total of 7.4 inches of precipitation in May, which is 525 percent of average for the month.

The monthly totals for the Northern Sierra 8-Station Precipitation Index for water year 2008–2009 are presented in Table 8-2. Precipitation for the water year totaled 46.85 inches, which is 94 percent of average. Monthly precipitation totals for October, February, March, May, and June were above average at 104, 149, 120, 262, and 130 percent, respectively. The two wettest months were February and March with 11.9 and 8.3 inches of precipitation, respectively. January and July, conversely, registered as the sixteenth and sixth driest years on record, respectively, for the index.

Approximately 25 percent of the water year total precipitation was recorded in February, during which precipitation was observed on 22 days. Two Pacific storms came ashore bringing widespread rain in the first 2 weeks of the month. The south coast and south central coast saw the heaviest precipitation from these events. During the second week, the storminess continued with a slow moving system bringing valley rain and mountain snow to the northern part of the state.

Monthly statewide snowpack for the 2008–2009 water year is shown in Table 8-3. Snow water equivalents, shown in Table 8-3, were obtained from daily snow sensor reports corresponding to the first day of each month. On April 1, the snowpack stood at 23.7 inches of snow water content (April 1 is typically the average annual date of peak snow accumulation); it was 82 percent of the April 1 average. This water year, the snowpack peaked on March 25 at 25.2 inches.



Figure 8-1 Statewide Precipitation by Hydrologic Region, 2008–2009 Water Year, as Percent of Average

Table 8-1 Monthly Precipitation Totals at Various Locations in California during Water Year 2008–2009

| Monthly Precipitation (in inches and Percent of Average) | | | | | | | | | | | | | |
|--|------|------|-------|------|-------|-------|------|------|------|------|------|------|----------|
| 2008 | | | | 2009 | | | | | | | | | WY Total |
| Station ^a | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | |
| Mount Shasta City | 3.18 | 5.19 | 2.29 | 1.15 | 10.51 | 9.00 | 0.69 | 2.94 | 2.83 | 0.00 | 0.72 | 0.23 | 38.73 |
| percent of avg | 136 | 113 | 39 | 18 | 188 | 205 | 25 | 173 | 267 | 0 | 232 | 29 | 107 |
| Eureka Woodley Island | 0.93 | 5.52 | 6.66 | 1.58 | 6.20 | 5.45 | 1.23 | 2.93 | 0.18 | 0.06 | 0.02 | 1.03 | 31.79 |
| percent of avg | 31 | 100 | 104 | 24 | 120 | 105 | 43 | 162 | 30 | 55 | 8 | 136 | 83 |
| Blue Canyon (DWR-2) | 2.92 | 6.69 | 10.21 | 5.58 | 17.00 | 10.30 | 3.02 | 8.60 | 0.41 | 0.01 | 0.06 | 0.06 | 64.86 |
| percent of avg | 78 | 85 | 98 | 45 | 174 | 121 | 60 | 316 | 47 | 5 | 17 | 8 | 103 |
| Sacramento WB City | 0.75 | 2.22 | 1.75 | 1.48 | 5.06 | 1.83 | 1.61 | 1.30 | 0.47 | 0.00 | 0.00 | 0.19 | 16.66 |
| percent of avg | 82 | 109 | 55 | 39 | 155 | 77 | 109 | 283 | 362 | 0 | 0 | 90 | 93 |
| San Francisco WB AP | 0.35 | 2.31 | 2.82 | 0.90 | 7.92 | 2.76 | 0.24 | 0.80 | 0.00 | 0.00 | 0.00 | 0.28 | 18.38 |
| percent of avg | 33 | 97 | 76 | 20 | 241 | 100 | 17 | 182 | 0 | 0 | 0 | 147 | 92 |
| Yosemite Headquarters | 1.63 | 3.74 | 6.74 | 4.58 | 7.16 | 7.77 | 1.73 | 7.40 | 0.35 | 0.00 | 0.15 | 0.00 | 41.25 |
| percent of avg | 95 | 89 | 102 | 68 | 114 | 157 | 53 | 525 | 61 | 0 | 75 | 0 | 112 |
| Fresno WB AP | 0.23 | 1.37 | 1.09 | 1.02 | 2.43 | 0.24 | 0.72 | 0.46 | 0.20 | 0.00 | 0.00 | 0.01 | 7.77 |
| percent of avg | 48 | 123 | 62 | 51 | 117 | 13 | 67 | 164 | 286 | 0 | 0 | 7 | 71 |
| Grant Grove | 1.02 | 3.75 | 7.12 | 6.02 | 9.01 | 3.68 | 2.60 | 1.84 | 1.13 | 0.00 | 0.07 | 0.04 | 36.28 |
| percent of avg | 52 | 73 | 91 | 80 | 125 | 49 | 60 | 157 | 404 | 0 | 100 | 7 | 83 |
| Los Angeles-WSO Airport | 0.00 | 1.50 | 2.51 | 0.51 | 3.41 | 0.05 | 0.00 | 0.00 | 0.15 | 0.00 | 0.00 | 0.00 | 8.13 |
| percent of avg | 0 | 106 | 120 | 19 | 117 | 3 | 0 | 0 | 300 | 0 | 0 | 0 | 64 |
| San Diego NWS-Lindbergh | 0.18 | 2.49 | 3.38 | 0.08 | 2.63 | 0.18 | 0.14 | 0.04 | 0.03 | 0.00 | 0.00 | 0.00 | 9.15 |
| percent of avg | 43 | 220 | 177 | 4 | 137 | 11 | 18 | 19 | 43 | 0 | 0 | 0 | 88 |

^a AP = Airport; NWS = National Weather Service; WB = Weather Bureau; WSO = Weather Service Office; WY: = Water Year (October 1–September 30)

Table 8-2 Northern Sierra 8-Station Precipitation Index for Water Year 2008–2009

| | | Precipitation (inches) | Percent of Monthly Average Precipitation |
|------|--------------|------------------------|--|
| 2008 | October | 3.11 | 104 |
| | November | 5.50 | 87 |
| | December | 6.10 | 73 |
| 2009 | January | 3.10 | 34 |
| | February | 11.90 | 149 |
| | March | 8.30 | 120 |
| | April | 1.70 | 44 |
| | May | 5.50 | 262 |
| | June | 1.30 | 130 |
| | July | 0.03 | 15 |
| | August | 0.17 | 57 |
| | September | 0.14 | 16 |
| | Total | 46.85 | 94 |

Table 8-3 Statewide Snowpack for Selected Months of Water Year 2008–2009

| | | Snow Water Equivalent (inches) | Percent of Average | Percent of April 1 Average ^a |
|------|------------|--------------------------------|--------------------|---|
| 2008 | October 1 | 0 | 0 | 0 |
| | November 1 | 0.3 | 30 | 1 |
| | December 1 | 0.6 | 12 | 2 |
| 2009 | January 1 | 7.8 | 78 | 28 |
| | February 1 | 10.2 | 58 | 36 |
| | March 1 | 19.6 | 77 | 68 |
| | April 1 | 23.7 | 82 | 82 |
| | May 1 | 13.9 | 63 | 49 |
| | June 1 | 1 | 13 | 4 |

^a April 1 is the average date of peak statewide snowpack.
This table is based on snow pillow (a device for measuring snowpack at automated reporting stations) data.

Runoff and Storage

Statewide river runoff totaled 65 percent of average in the 2008–2009 water year. The monthly runoff totals for the Sacramento River Region, the San Joaquin River Region, the Tulare Lake Region, and the Feather River are shown in Table 8-4. The water year runoff totals for these regions were 70, 83, 71, and 68 percent of average, respectively.

From a water supply perspective, the most closely monitored period is April through July. April concluded with 66, 99, and 87 percent of normal runoff for the Sacramento River, San Joaquin River, and Tulare Lake regions, respectively. By the end of July, the April–July runoff was 81, 88, and 76 percent of average for the three respective regions.

The Sacramento Valley Water Year Hydrologic Classification (Sacramento Valley 40-30-30 Index) and the San Joaquin Valley Water Year Hydrologic Classification (San Joaquin Valley 60-20-20 Index) were “dry” and “below normal,” respectively, based on observed data for water year 2008–2009.

(See sidebar, Precipitation and Water Supply Indices.)

Monthly storage totals for the major Sierra reservoirs are shown in Table 8-5. During water year 2008–2009, statewide reservoir storage reached its peak of 87 percent of average at the end of May following the wet months of February and March. The water year began at only 70 percent of average reservoir storage because of the dry 2007–2008 water year. The percent of average storage decreased through January, then rose until its peak in May, and then declined to 79 percent of average in August and September. End-of-water-year storage in the major Sierra reservoirs ranged from 167 percent of average in Millerton Lake on the San Joaquin River to 41 percent of average in Success Lake on the Tule River.

Water Year 2009–2010 October through December Water Conditions

The last three months of calendar year 2009 mark the beginning of new water year

Table 8-4 Unimpaired Runoff for Water Year 2008–2009 (million acre-feet)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | WY |
|-------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|-----------|
| SRR runoff | 0.36 | 0.54 | 0.49 | 0.68 | 1.99 | 3.00 | 1.57 | 2.54 | 0.77 | 0.43 | 0.36 | 0.31 | 13.02 |
| percent of average | 69 | 61 | 28 | 26 | 75 | 105 | 66 | 111 | 61 | 71 | 85 | 77 | 70 |
| SJR runoff | 0.02 | 0.15 | 0.08 | 0.28 | 0.33 | 0.64 | 0.83 | 1.67 | 0.64 | 0.21 | 0.05 | 0.03 | 4.94 |
| percent of average | 34 | 114 | 31 | 64 | 72 | 105 | 99 | 118 | 58 | 47 | 44 | 41 | 83 |
| TLR runoff | 0.02 | 0.07 | 0.05 | 0.11 | 0.12 | 0.19 | 0.35 | 0.72 | 0.32 | 0.15 | 0.04 | 0.02 | 2.18 |
| percent of average | 50 | 97 | 42 | 60 | 64 | 72 | 87 | 100 | 51 | 51 | 41 | 40 | 71 |
| Feather River runoff | 0.06 | 0.13 | 0.11 | 0.17 | 0.48 | 0.78 | 0.41 | 0.61 | 0.18 | 0.09 | 0.08 | 0.06 | 3.15 |
| percent of average | 55 | 61 | 28 | 29 | 79 | 107 | 63 | 95 | 52 | 55 | 76 | 67 | 68 |
| Statewide percent of average | 59 | 57 | 28 | 29 | 65 | 94 | 67 | 109 | 56 | 57 | 70 | 68 | 65 |

SRR: Sacramento River Region

Sacramento River above Bend Bridge, Feather River at Oroville, Yuba River near Smartville, American River below Folsom

SJR: San Joaquin River Region

Stanislaus River below Goodwin, Tuolumne River below La Grange, Merced River below Merced Falls, San Joaquin River below Millerton Lake

TLR: Tulare Lake Region

Kings River below Pine Flat, Kaweah River below Terminus, Tule River below Lake Success, Kern River at Isabella

WY: Water Year (October 1–September 30)

Table 8-5 Reservoir Storage for Water Year 2008–2009 (thousand acre-feet and percent of average)

| Reservoir | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|--------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Shasta | 1,283 | 1,331 | 1,362 | 1,416 | 1,960 | 2,881 | 2,998 | 3,119 | 2,797 | 2,326 | 1,936 | 1,774 |
| percent of avg | 48 | 49 | 48 | 46 | 59 | 78 | 76 | 80 | 77 | 72 | 67 | 65 |
| Oroville | 1,029 | 999 | 981 | 1,020 | 1,361 | 1,978 | 2,055 | 2,282 | 2,057 | 1,553 | 1,383 | 1,337 |
| percent of avg | 48 | 47 | 45 | 44 | 55 | 73 | 71 | 76 | 71 | 60 | 60 | 61 |
| Folsom | 234 | 209 | 218 | 246 | 422 | 746 | 780 | 933 | 855 | 601 | 452 | 412 |
| percent of avg | 47 | 45 | 46 | 48 | 78 | 119 | 107 | 114 | 106 | 87 | 74 | 74 |
| San Luis | 254 | 410 | 480 | 702 | 821 | 1,006 | 959 | 711 | 351 | 380 | 402 | 421 |
| percent of avg | 24 | 34 | 35 | 44 | 47 | 55 | 53 | 44 | 27 | 38 | 47 | 44 |
| Pardee | 159 | 167 | 167 | 175 | 176 | 178 | 178 | 199 | 195 | 188 | 178 | 168 |
| percent of avg | 92 | 95 | 95 | 98 | 98 | 98 | 97 | 105 | 101 | 99 | 97 | 93 |
| New Melones | 1,104 | 1,123 | 1,146 | 1,168 | 1,208 | 1,288 | 1,270 | 1,333 | 1,300 | 1,224 | 1,158 | 1,108 |
| percent of avg | 82 | 83 | 83 | 82 | 82 | 85 | 84 | 88 | 85 | 83 | 83 | 83 |
| Don Pedro | 1,027 | 1,036 | 1,045 | 1,099 | 1,200 | 1,347 | 1,419 | 1,716 | 1,761 | 1,629 | 1,513 | 1,443 |
| percent of avg | 78 | 78 | 78 | 79 | 83 | 91 | 95 | 111 | 109 | 105 | 105 | 105 |
| Millerton | 169 | 180 | 194 | 229 | 298 | 391 | 486 | 518 | 520 | 430 | 351 | 350 |
| percent of avg | 87 | 82 | 71 | 69 | 87 | 107 | 133 | 129 | 125 | 131 | 149 | 167 |
| Pine Flat | 122 | 153 | 179 | 227 | 286 | 357 | 458 | 746 | 605 | 347 | 212 | 200 |
| percent of avg | 36 | 41 | 44 | 48 | 54 | 63 | 75 | 103 | 88 | 68 | 56 | 59 |
| Kaweah | 12 | 21 | 16 | 35 | 35 | 64 | 115 | 183 | 109 | 32 | 12 | 10 |
| percent of avg | 106 | 164 | 104 | 168 | 141 | 158 | 151 | 151 | 103 | 62 | 61 | 78 |
| Success | 4 | 5 | 7 | 12 | 20 | 30 | 38 | 39 | 39 | 10 | 6 | 5 |
| percent of avg | 42 | 52 | 57 | 68 | 82 | 90 | 86 | 72 | 79 | 30 | 33 | 41 |
| Isabella | 111 | 111 | 117 | 125 | 132 | 144 | 171 | 249 | 234 | 178 | 131 | 102 |
| percent of avg | 68 | 71 | 74 | 72 | 71 | 71 | 74 | 83 | 75 | 65 | 61 | 55 |
| Statewide % average | 70 | 71 | 68 | 66 | 72 | 82 | 82 | 87 | 83 | 80 | 79 | 79 |

2009–2010. Storms in October provided above-average precipitation for most regions of the state. November was extremely dry statewide. December showed generally below-average rainfall for the northern half of the state and generally above-average rainfall for the southern half.

At the end of October, water year runoff totals were 97, 263, and 270 percent of average for the Sacramento River, San Joaquin River, and Tulare Lake regions, respectively. By the end of December, runoff

totals for the new water year were 46, 73, and 104 percent of average, respectively, for the same three regions.

State Water Project Storage

SWP operates a complex system of dams and reservoirs to collect and store water for future deliveries. Lake Oroville is the first of two primary SWP conservation facilities. Lake Oroville inflow comes from tributaries of the Feather River.

Precipitation and Water Supply Indices

Northern Sierra 8-Station Precipitation Index

In the northern Sierra Nevada, precipitation is indexed by averaging rain gauge totals at eight representative stations, creating what is known as the Northern Sierra 8-Station Precipitation Index. The eight stations are: Mount Shasta City, Shasta Dam, Mineral, Quincy, Brush Creek, Sierraville Ranger Station, Blue Canyon, and Pacific House. The 8-Station Index provides a representative sample of the major watersheds (upper Sacramento, Feather, Yuba, and American rivers) and serves as a wetness index for the Sacramento River hydrologic region.

Sacramento River Runoff

Sacramento River runoff is the sum of unimpaired flow in million acre-feet (maf) at the Sacramento River above Bend Bridge, Feather River at Oroville (inflow to Lake Oroville), Yuba River near Smartville, and American River below Folsom Lake. The Sacramento Valley unimpaired runoff represents the natural water production of the Sacramento River basin, unaltered by upstream diversions, storage, or export of water to or import of water from other basins.

Also known as the “Sacramento River Index,” this index was previously used to determine year type classifications under State Water Resources Control Board (SWRCB) Water Right Decision 1485. It was also previously referred to as the “4 River Index” or “4 Basin Index.”

Eight River Index

This index is the sum of the unimpaired runoff from eight rivers—four in the Sacramento Valley (Sacramento River Runoff) and four in the San Joaquin Valley: Stanislaus River below Goodwin Dam, Tuolumne River below La Grange, Merced River below Merced Falls, and San Joaquin River below Millerton Lake.

This index determines the duration of the fish and wildlife salinity and flow standards at Chipps Island or Port Chicago from February through June.

Sacramento Valley 40-30-30 Index

SWRCB Water Right Decision 1641 (D-1641) applies the Sacramento Valley Water Year Hydrologic Classification (Sacramento Valley 40-30-30 Index), a water supply forecasting tool, to derive the water year type for the Sacramento Valley. Previously, the Sacramento River Index was used to classify types of water years. SWRCB first introduced the Sacramento Valley 40-30-30 Index in the 1991 Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Bay-Delta Plan), and continued using it with the 1995 Bay-Delta Plan. D-1641 implements portions of the 1995 Bay-Delta Plan with respect to the operation of the State Water Project and the Central Valley Project. The Sacramento Valley 40-30-30 Index is used to determine the Sacramento Valley water year type for the purpose of implementing water quality objectives defined in D-1641. It also provides an estimate of the potential water supply originating in the basin from rainfall and snowmelt runoff, groundwater accretion, and reservoir carryover storage. The Sacramento Valley 40-30-30 Index incorporates seasonal differences in water contribution for the year

and includes the prior year's conditions in order to establish a more reliable index of water availability. The 40-30-30 factors represent the percentage weight given to the following:

- (1) 40%—the current year's April through July Sacramento Valley unimpaired runoff;
- (2) 30%—the current year's October through March Sacramento Valley unimpaired runoff; and
- (3) 30%—the previous year's index with a cap of 10 maf (to account for required flood control reservoir releases during wet years).

The water year type is determined by the index value on a scale specific to the Sacramento Valley (as defined in D-1641).

| Classification | Index (maf) |
|-----------------------|--|
| Wet | Equal to or greater than 9.2 |
| Above Normal | Greater than 7.8 and less than 9.2 |
| Below Normal | Equal to or less than 7.8 and greater than 6.5 |
| Dry | Equal to or less than 6.5 and greater than 5.4 |
| Critical | Equal to or less than 5.4 |

Water year types are set by the first-of-the-month forecasts beginning in February, and the Sacramento Valley 40-30-30 Index May 1 forecast determines the final water year type for implementing water quality and flow requirements contained in D-1641. The D-1641 objectives are conditioned by water year type and generally become less stringent during dryer years.

San Joaquin Valley 60-20-20 Index

D-1641 uses a similar method to determine the water year type for the San Joaquin Valley. The San Joaquin Valley Water Year Hydrologic Classification (San Joaquin Valley 60-20-20 Index) uses (1) the current year's April through July San Joaquin Valley unimpaired runoff (60 percent); (2) the current year's October through March San Joaquin Valley unimpaired runoff (20 percent); and (3) the previous year's San Joaquin Valley 60-20-20 Index (20 percent, with a cap of 4 maf to account for required flood control reservoir releases during wet years).

The water year type is determined by the index value on a scale specific to the San Joaquin Valley (as defined in D-1641).

| Classification | Index (maf) |
|-----------------------|--|
| Wet | Equal to or greater than 3.8 |
| Above Normal | Greater than 3.1 and less than 3.8 |
| Below Normal | Equal to or less than 3.1 and greater than 2.5 |
| Dry | Equal to or less than 2.5 and greater than 2.1 |
| Critical | Equal to or less than 2.1 |

The San Joaquin Valley 60-20-20 Index May 1 forecast determines the water year type for D-1641 San Joaquin River Vernalis flow standards.

The San Luis Reservoir is the second of the two primary SWP conservation facilities. This Central California joint-use facility derives its inflow from pumping at the Gianelli Pumping-Generating Plant. San Luis is an off-stream storage reservoir. Most of the water is pumped into the reservoir from late fall to early spring. This water is temporarily stored, then released into the California Aqueduct to meet water contractor peaking demands in the summer months. The remaining SWP dams and reservoirs regulate the stored water supply in delivery patterns that are designed to fit local water demands.

Water Year 2008–2009 Storage Totals

At the end of the 2008–2009 water year, water storage in major SWP reservoirs and the State's share of joint-use reservoirs was 2.14 million acre-feet (maf) or 39 percent of maximum storage, compared to 1.95 maf or 36 percent of maximum storage at the end of water year 2007–2008. The average end-of-month total storage for the 2008–2009 water year in major SWP reservoirs was 2.42 maf. End-of-water-year storage on September 30, 2009, at Lake Oroville was 1.34 maf, which was about 0.24 maf more than the previous water year. The State's share of San Luis Reservoir storage at the end of the 2008–2009 water year was 223,495 acre-feet (af), compared with 199,746 af in the previous water year. The combined storage in southern reservoirs was 498,007 af on September 30, 2009, compared with 570,653 af at the end of the 2007–2008 water year.

Calendar Year 2009 Storage Totals

The total storage in major SWP reservoirs was about 2.35 maf at the end of 2009, compared with 1.79 maf in 2008. The State's share of San Luis Reservoir storage was 760,213 af on December 31, 2009, compared with 258,147 af at the same time in 2008. The combined storage in the southern reservoirs was 555,601 af on December 31,

2009, compared with 552,394 af at the same time in 2008.

Lake Oroville

Lake Oroville has a maximum water storage capacity of 3,537,580 af. Runoff from the upper Feather River drainage is collected and stored in this reservoir. Water captured and stored in Lake Oroville is released to the Sacramento-San Joaquin Delta through Oroville Dam, Thermalito Diversion Dam, and Thermalito Afterbay.

Water Year 2008–2009 Inflow

Lake Oroville inflow for the 2008–2009 water year totaled about 2.80 maf, which was 66 percent of the 30-year average (4.25 maf). Maximum daily inflow occurred on March 2, 2009, at 77,376 af. Minimum daily inflow occurred on December 7, 2008, at 654 af. Peak monthly total inflow occurred in March at 646,640 af, 23 percent of the water year total. Figure 8-2 shows monthly Lake Oroville inflow for calendar years 2007, 2008, and 2009. The maximum total in 30 years was in water year 1982–1983 at 8,853,572 af. The minimum total in 30 years was in water year 1976–1977 at 751,131 af. Figure 8-3 shows cumulative Lake Oroville inflow for calendar years 1983, 2009, and 1977, respectively.

Calendar Year 2009 Inflow and Storage

Total Lake Oroville inflow during the calendar year was 2,802,429 af. Minimum storage occurred on January 12, 2009, at 969,447 af, 27 percent of lake capacity. Maximum storage occurred on May 27, 2009, at 2,287,479 af, 65 percent of lake capacity. End-of-year Lake Oroville storage was 1,029,534 af. Figure 8-4 compares end-of-month storage in Lake Oroville for the 2008 and 2009 calendar years.

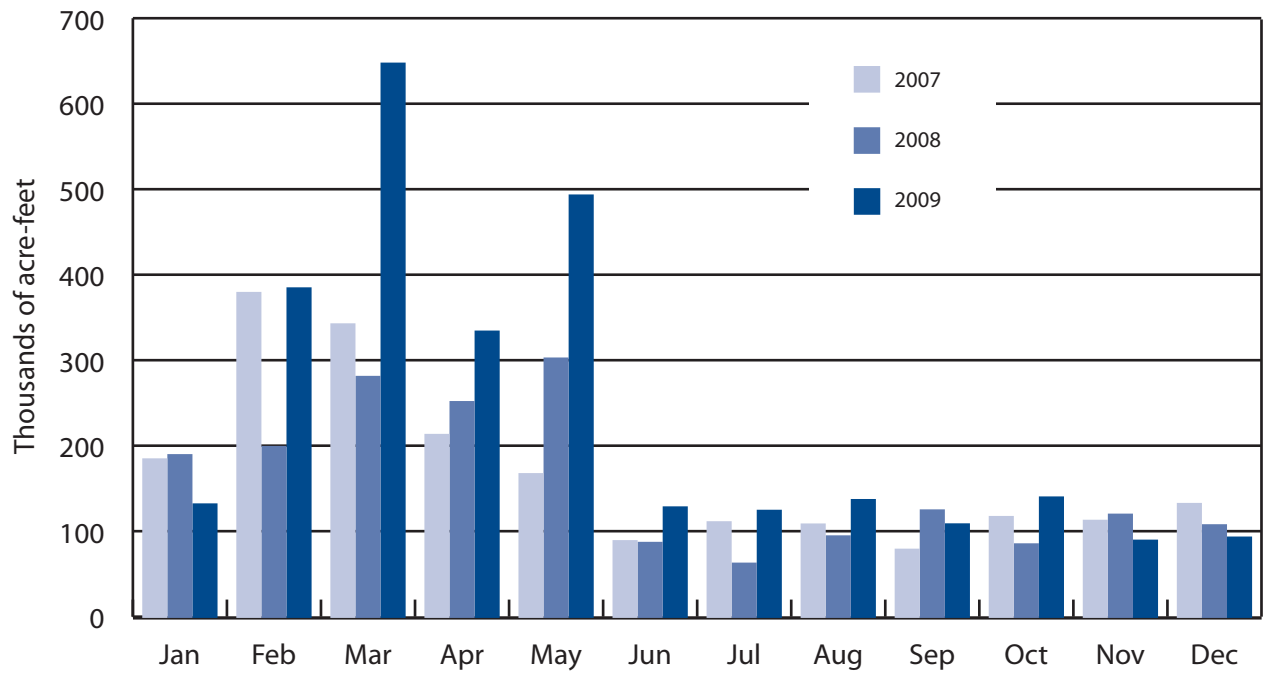


Figure 8-2 Monthly Inflow into Lake Oroville from the Feather River, 2007–2009 Calendar Years

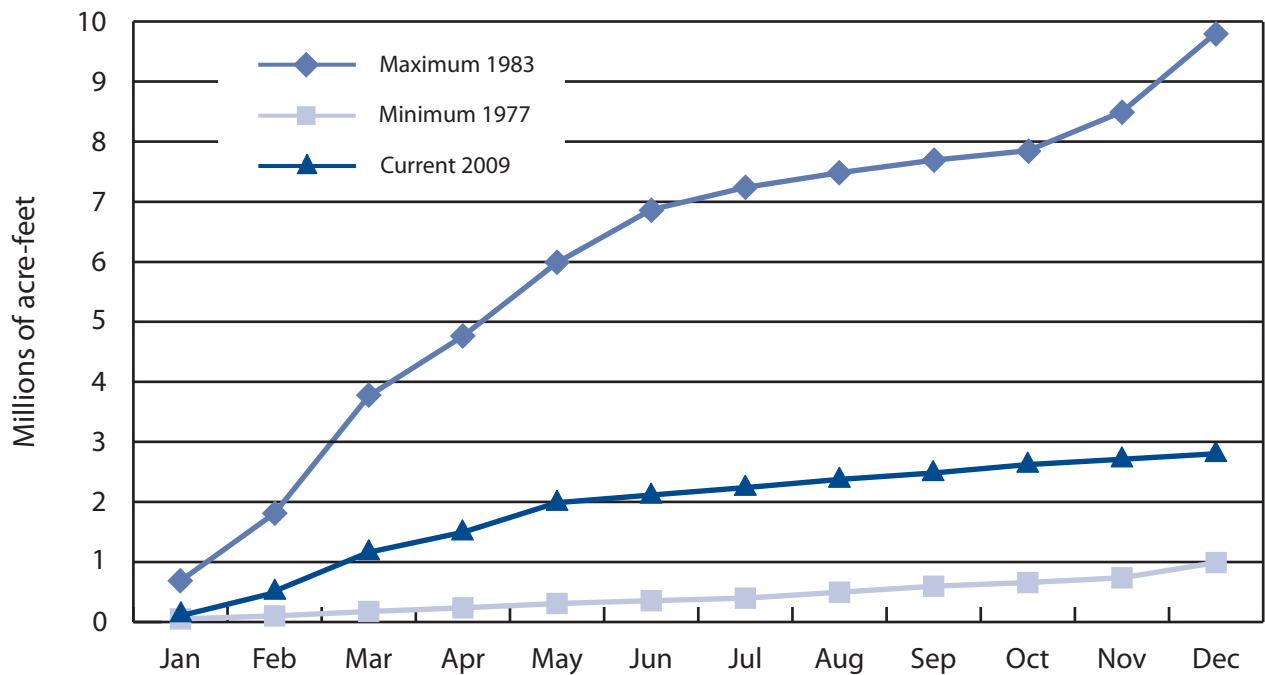


Figure 8-3 Cumulative Maximum, Minimum, and Current Lake Oroville Inflow, Calendar Years 1983, 1977, and 2009, Respectively

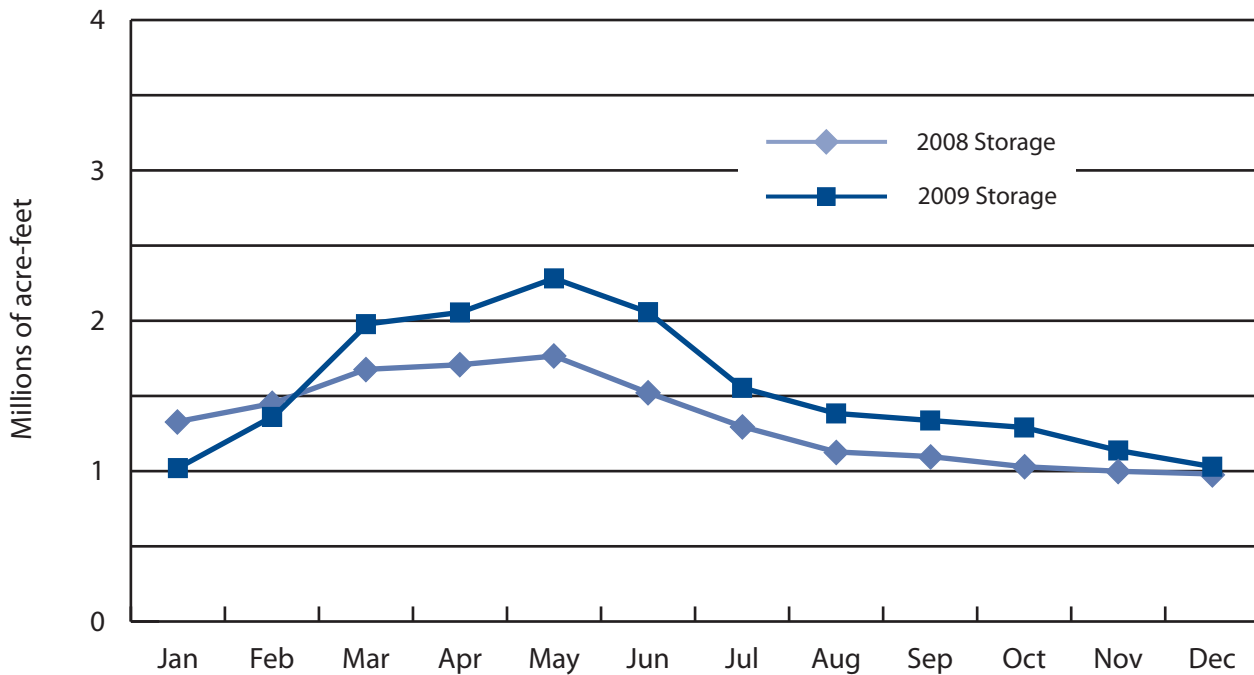


Figure 8-4 End-of-Month Storage in Lake Oroville, 2008 and 2009 Calendar Years

2008–2009 Water Year San Luis Reservoir Operations

San Luis Reservoir is operated jointly by DWR and the Bureau of Reclamation pursuant to operating procedures adopted in June 1981. San Luis Reservoir has a normal operating capacity of 2,027,840 af. The SWP share of this capacity is 1,062,183 af.

San Luis Reservoir reached its maximum water year total storage on April 15, 2009, at 1,023,777 af, 50 percent of its normal maximum operating capacity. At the beginning of the water year, San Luis Reservoir contained 236,625 af, 12 percent of its capacity. SWP storage share at the beginning of the water year was 199,746 af. The highest end-of-month SWP share of water storage for the 2008–2009 water year occurred on March 31, 2009, at 597,334 af. (See Figure 8-5.)

2008–2009 Water Year Lake del Valle Operations

Lake del Valle, located off the South Bay Aqueduct, functions primarily as a storage facility for water delivery into Santa Clara and Alameda counties. At the beginning of the water year, Lake del Valle held 38,170 af, which was about 49 percent of its maximum capacity of 77,106 af. Its highest storage during the 2008–2009 water year occurred on May 11, 2009, at 39,351 af. Its lowest storage occurred on January 10, 2009, at 29,325 af.

By the end of the water year, on September 30, 2009, storage in Lake del Valle was 36,621 af, 47 percent of its maximum capacity of 77,106 af. There were no releases to Arroyo Valle, and releases for the water year to the South Bay Aqueduct from Lake del Valle totaled 14,165 af.

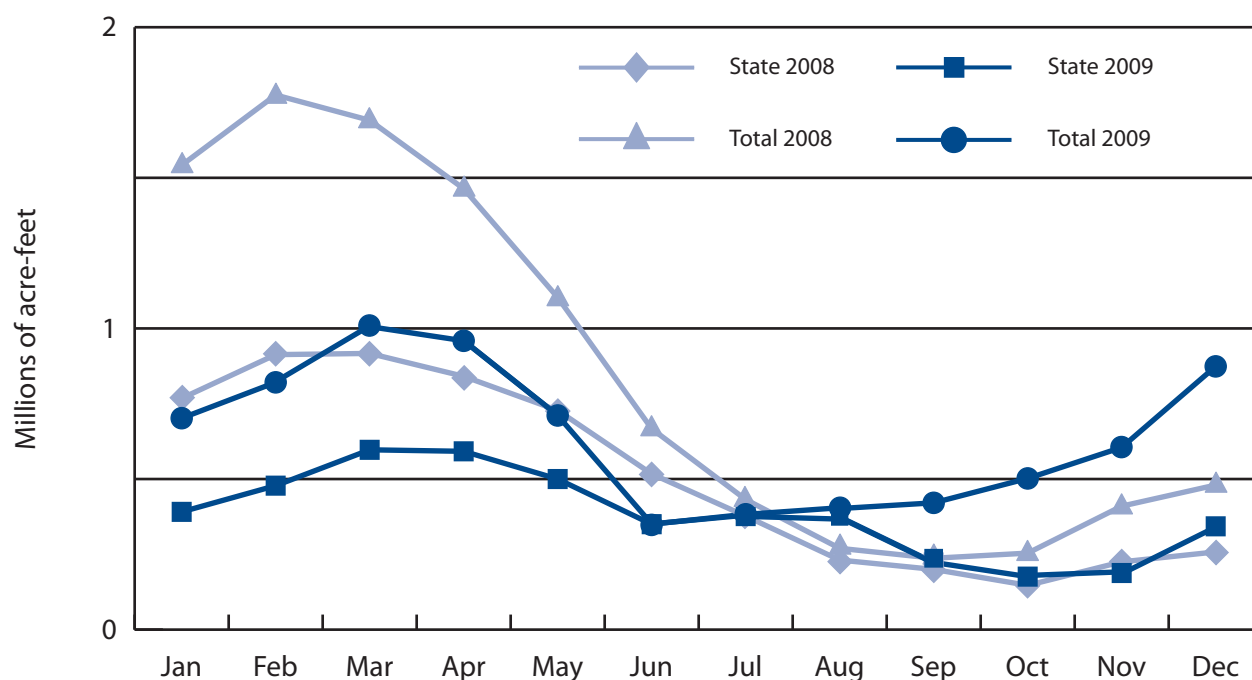


Figure 8-5 End-of-Month Storage in San Luis Reservoir, 2008 and 2009 Calendar Years

2008–2009 Water Year Southern Reservoir Operations

During normal operating conditions, DWR maintains its four southern reservoirs—Pyramid, Castaic, Silverwood, and Perris—at or near full operating capacity to ensure uninterrupted delivery of water to Southern California SWP contractors.

At the beginning of the water year, these reservoirs held 570,653 af, which is 83 percent of their combined normal maximum operating capacity of 689,021 af. At the end of the water year, the reservoirs held 498,007 af, 72 percent of combined normal maximum operating capacity.

Diversions from the Delta

SWP diverts water from the Sacramento-San Joaquin Delta, through the Banks and Barker Slough pumping plants, for delivery to SWP water contractors' storage facilities.

In 2009, the SWP diverted 1,665,015 af at Banks Pumping Plant. There was 13,216 af of Cross Valley Canal water and 115,359 af of Central Valley Project (CVP) water wheeled at Banks Pumping Plant by DWR during 2009. The CVP diverted 1,916,867 af at Jones Pumping Plant and 113,306 af at Contra Costa Pumping Plant. The combined Delta exports include all of these plants. Figure 8-6 shows the amounts of water pumped each month in 2009 at Banks Pumping Plant. Figure 8-7 shows the monthly amounts of water diverted from the Delta in 2009 by the SWP and CVP. The CVP diverts water to similar areas from the Delta through Jones Pumping Plant and Contra Costa Pumping Plant.

Water is delivered from Banks Pumping Plant to the South Bay Area through the South Bay Aqueduct, and to the San Joaquin Valley, Central Coastal, and Southern California areas through the California Aqueduct. The SWP diverts water from Barker Slough Pumping Plant to the North Bay Aqueduct. In 2009, the North Bay Aqueduct received

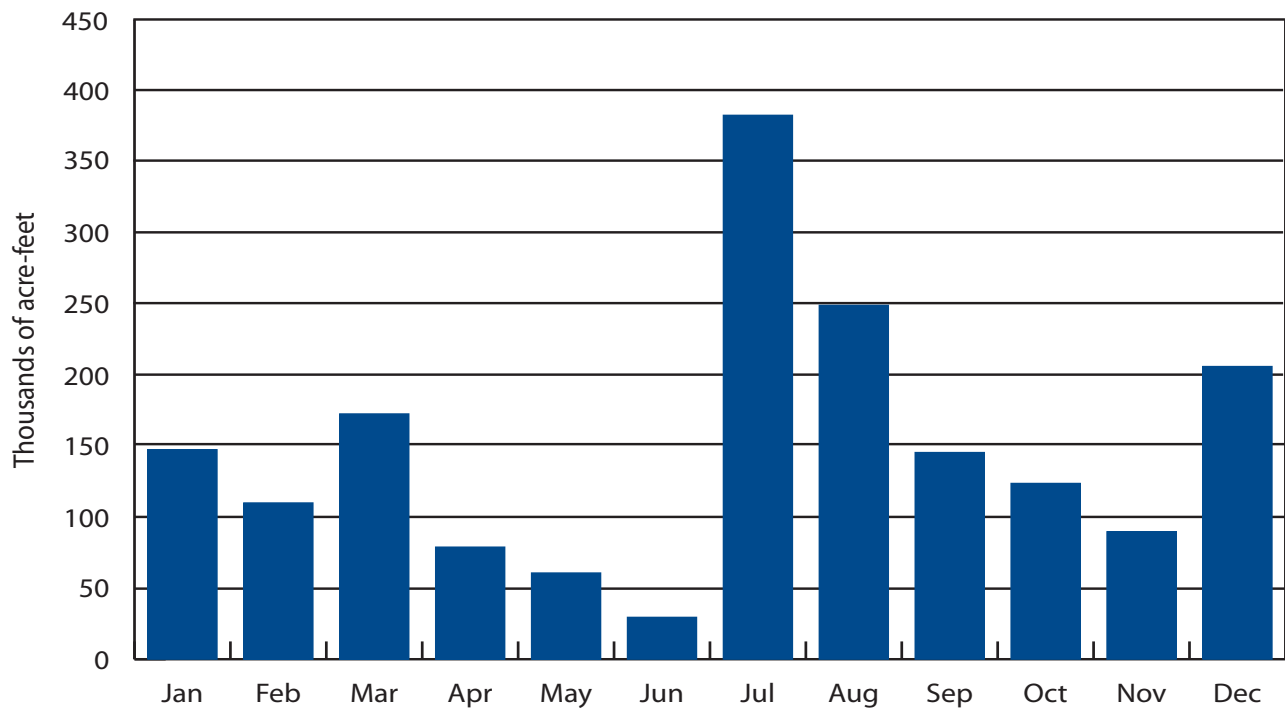


Figure 8-6 Water Pumped at Banks Pumping Plant, 2009 Calendar Year

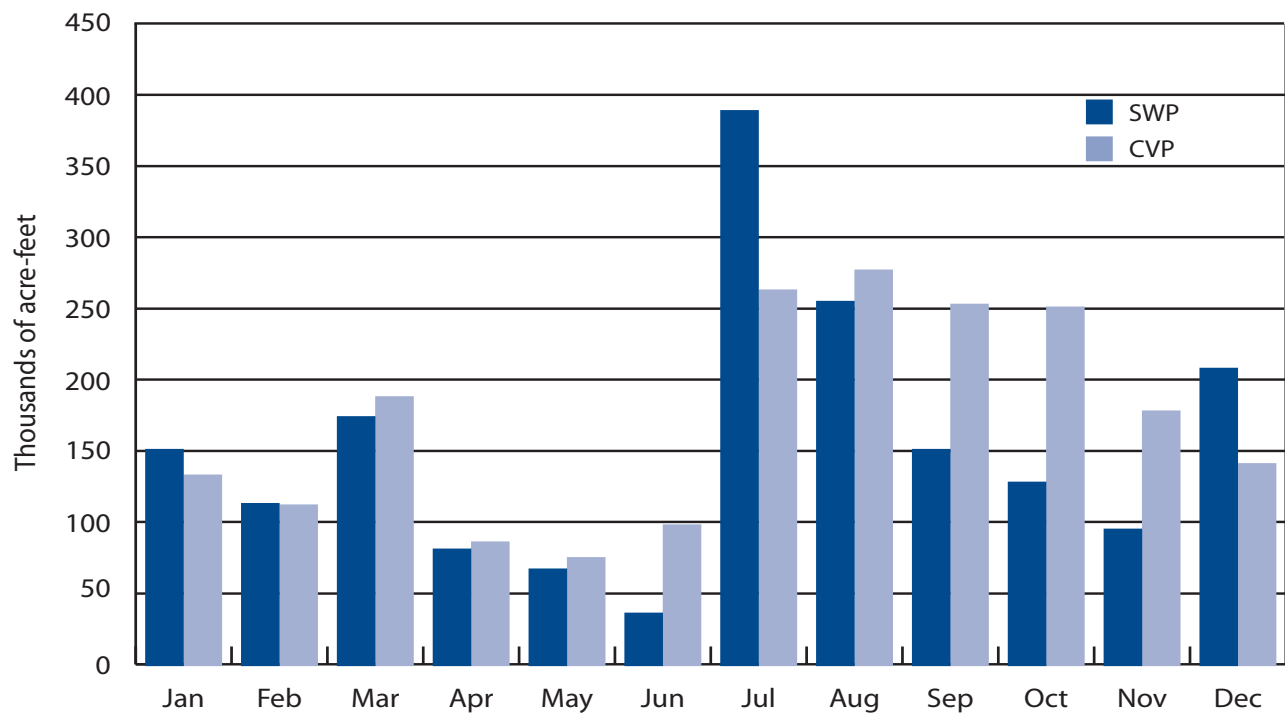


Figure 8-7 Sacramento-San Joaquin Delta Exports by State Water Project and Central Valley Project, 2009 Calendar Year

42,391 af of water from the Barker Slough Pumping Plant.

Additional water supply information can be found on DWR's website.

Dos Amigos Pumping Plant diverts water from O'Neill Forebay to the California Aqueduct. Figure 8-8 shows monthly total amounts pumped at Dos Amigos Pumping Plant for calendar year 2009. The monthly total amount pumped at Dos Amigos Pumping Plant peaked in July 2009 at 343,647 af for the calendar year.

Maximum daily Delta exports occurred on July 29, 2009, at 23,391 af. Combined SWP and CVP monthly Delta exports in 2009 varied from a low of 127,880 af in June, to a high of 644,998 af in July. In 2009, Delta exports totaled approximately 3.82 maf.

In 2009, water pumped through the Edmonston Pumping Plant for delivery to Southern California totaled 1,150,644 af. Figure 8-9 shows the amount of water pumped each month in 2009.

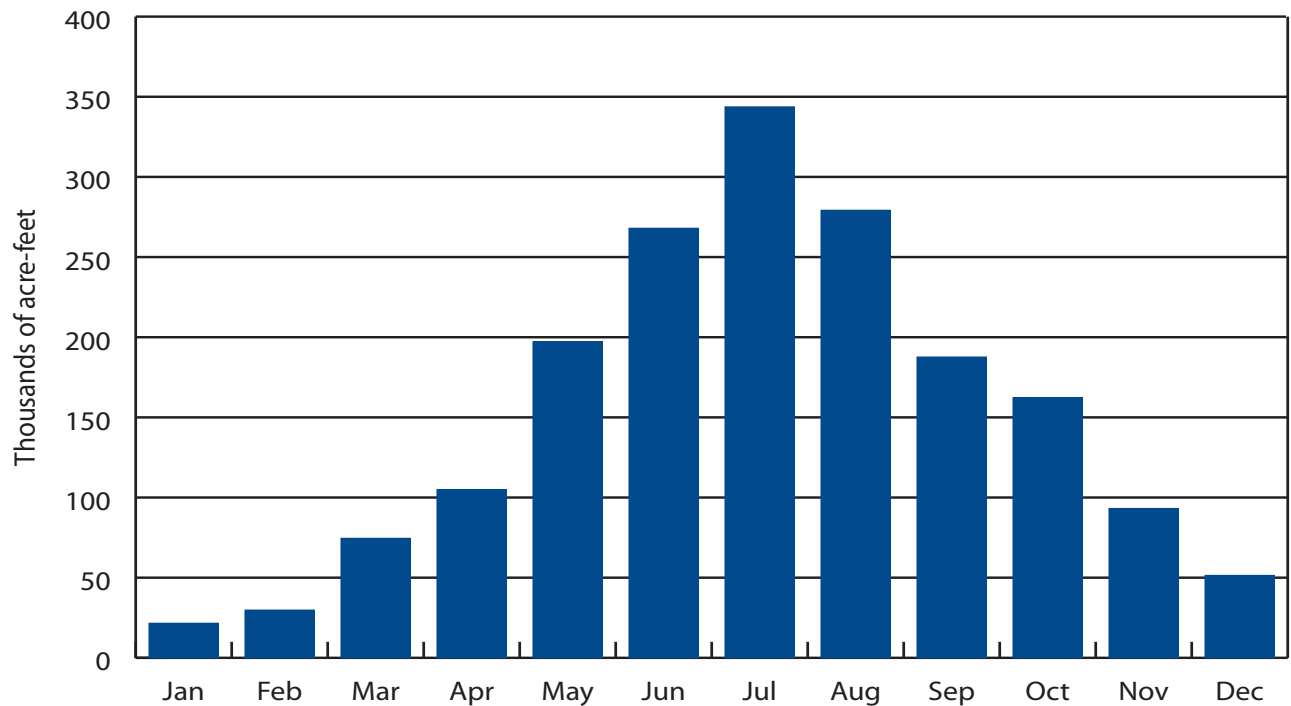


Figure 8-8 Water Pumped at Dos Amigos Pumping Plant, 2009 Calendar Year

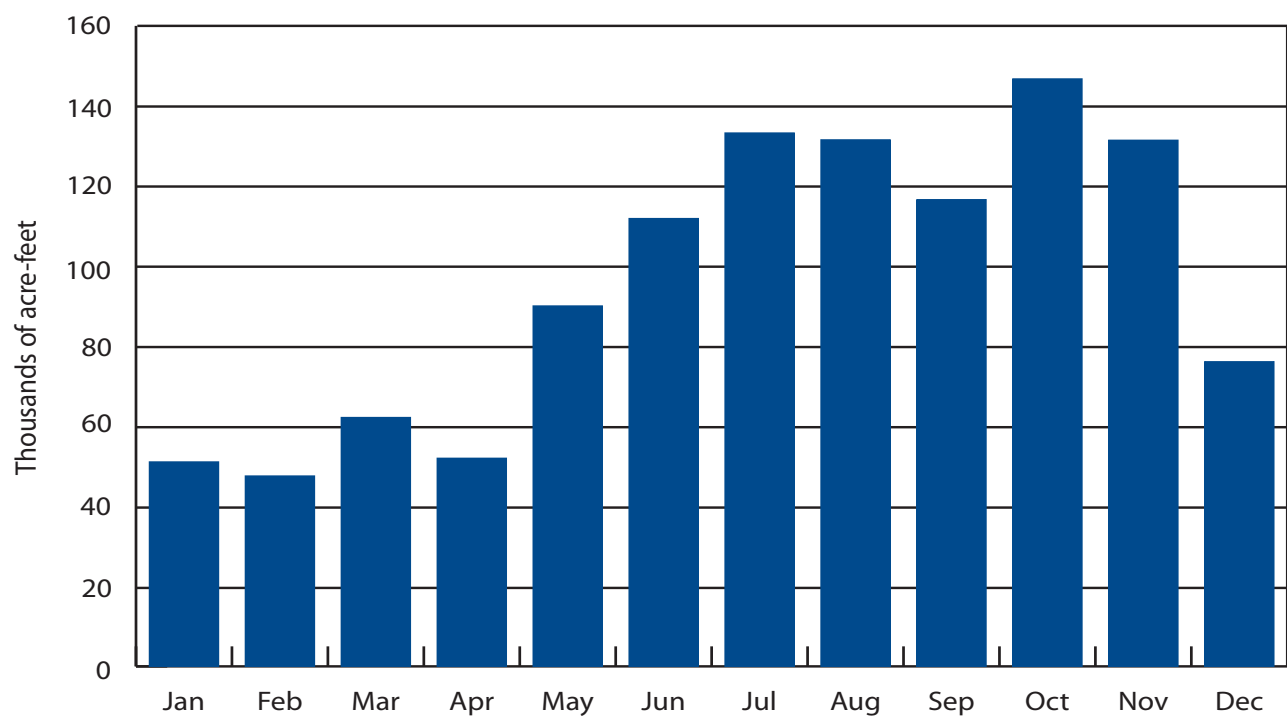


Figure 8-9 Water Pumped at Edmonston Pumping Plant, 2009 Calendar Year



Chapter 9

Water Contracts and Deliveries

Pyramid Lake, a reservoir of the State Water Project.

Significant Events in 2009

The Sacramento and San Joaquin river watersheds were both classified as “dry” in 2009. As a result, DWR approved only 40 percent of the State Water Project (SWP) contractors’ Table A allocation requests totaling 1,666,550 acre-feet (af).

Six SWP contractors recovered a total of 193,466 af from various water banking programs during 2009. In order to help meet water demands, a total of 139,043 af was delivered to their service areas. The remaining amount, 54,423 af, was temporarily stored in SWP facilities.

Substantial areas of California continued to experience wide-ranging effects due to the third consecutive year of dry conditions. To assist agencies experiencing potential water supply shortages, DWR established a 2009 Drought Water Bank (DWB). DWR executed 21 agreements with 19 agencies for the sale of water to the 2009 DWB, and 12 agencies executed agreements to purchase water from the 2009 DWB. DWR ultimately delivered 57,245 af to nine agencies.

As a participant in the flexible storage program, Metropolitan Water District of Southern California (Metropolitan), withdrew a record amount from its storage of 117,553 af total overall, with 77,911 af coming from Castaic Lake and 39,642 af from Lake Perris.

In April 2009, two amendments to the Lower Yuba River Accord (Yuba Accord) Water Purchase Agreement were executed. Amendment Number 1 was executed to address a technical issue related to refill accounting. Amendment Number 2 was executed to address pricing issues for groundwater substitution water.

Under the Yuba Accord Water Purchase Agreement, DWR received 60,000 af of Component 1 water to help offset Delta export pumping reductions to benefit fish, and 120,000 af of Yuba County Water Agency (Yuba) dry year water was provided to SWP and Central Valley Project (CVP) participating contractors.

Information for this chapter was provided by the State Water Project Analysis Office.

The long-term water supply contracts between the Department of Water Resources (DWR) and 29 public agencies and local water districts provide for water service from the State Water Project (SWP) and are the basis for the SWP's construction and on-going operations. The State provides SWP financing, capital construction, improvements, and all operations and maintenance of SWP facilities, and the agencies and local districts have contractually agreed to repay all associated costs.

The water supply contracts also set forth the maximum amount of water a contractor may request each year from the SWP, and these water amounts are written within the contracts in a list format known as Table A. "Table A" or "Table A water" represents a portion or all of the annual Table A requested by SWP water contractors and approved for delivery by DWR based on hydrologic conditions, current reservoir storage, and combined requests from the SWP water contractors. Under certain conditions, DWR is not able to deliver the quantity of water requested by contractors. In these years, a proportional amount is allocated and delivered according to the long-term water supply contracts by prorating the amount in proportion to each SWP water contractor's maximum Table A amount. Table A amounts may also be used as a factor to allocate other available water supplies to each contractor. Approved Table A amounts may also be referred to in this chapter as "approved amounts," "approved water," or "allocated water."

The long-term water supply contracts are amended as needed. During 2009, four amendments were executed and are more fully described in this chapter.

DWR also enters into agreements with SWP water contractors and other agencies, which may be amended periodically, to convey SWP and non-SWP water through the California Aqueduct and to approve the construction, operation, and maintenance of SWP facilities

and turnouts/turnins. These agreements are also listed in this chapter.

The State Water Project Analysis Office (SWPAO) developed a numbering system for contracts, amendments, and agreements executed by DWR. These numbers, referred to as SWPAO numbers, are designated in Chapter 9 text as "SWPAO #XXXXXX" and are located in parentheses after each contract, amendment, or agreement description. These numbers can be used as an identifier for anyone who contacts DWR staff for more detailed information on a particular document.

Amendments to Long-term SWP Water Supply Contracts

All the original long-term water supply contracts signed by DWR, public agencies, and local water districts, have been previously amended to incorporate mutually desired changes. Most amendments fall under the following general categories:

- (1) permanent transfers of Table A amounts from one SWP contractor to another;
- (2) allocation of costs and benefits for the addition or enlargement of SWP facilities;
- (3) purchase of excess capacity in the California Aqueduct; and
- (4) provisions to implement Monterey Agreement principles.

State Water Project Long-term Water Supply Contracts

The first water supply contract was signed with The Metropolitan Water District of Southern California (Metropolitan) on November 4, 1960. The contract was negotiated by DWR and Metropolitan according to terms of the contracting principles for water service contracts announced by the Governor on January 20, 1960.

The Metropolitan contract became the prototype for all water contracts; by the end of 1967, 31 agencies had contracted for water. In addition, a water supply contract was executed with the City of West Covina in December 1963, but was terminated in August 1965; the city's Table A amount was transferred to Metropolitan through an amendment to the district's long-term contract with DWR. Long-term contracts with Hacienda Water District and Devil's Den Water District were also terminated when those districts transferred their Table A amounts, through contract amendments, to Tulare Lake Basin Water Storage District (1981) and Castaic Lake Water Agency (1992), respectively. Today the SWP has long-term water supply contracts with 29 agencies. Those contracts have been amended periodically to incorporate mutually agreed upon modifications.

All water contracts signed in the 1960s included an estimate of the date water would first be delivered and a schedule of the amount of water the agency could expect to be delivered annually (annual Table A amounts). That amount was designed to increase gradually until the maximum amount of annual Table A was reached. The total combined maximum annual Table A amount for all water contracting agencies was initially 4,230,000 acre-feet (af), assuming full development of the SWP.

The contracts were initially designed to be valid for 75 years or until all bonds sold as part of the California Water Resources Development Bond Act were repaid, whichever period was longer. As a result of amendments to contracts in the 1990s, the current combined maximum annual Table A amount totals 4,172,786 af, and the contracts are in effect for the longest of the following periods: (1) the project repayment period, which extends to 2035; (2) 75 years from the date of the contract; or (3) the period ending with the latest maturity date of any bond used to finance the construction costs of project facilities.

2009 Amendments to Long-term Water Supply Contracts

Four water supply contract amendments were executed during 2009; one became effective January 1, 2009, and three will become effective January 1, 2010. These amendments are described in further detail below.

Increase Table A

Antelope Valley-East Kern Water Agency.

Amendment Number 22 to the water supply contract between Antelope Valley-East Kern Water Agency (AVEK) and DWR was executed on April 10, 2009. The amendment, effective January 1, 2009, will provide for increased capacity and an increase of 1,700 af to Table A amounts by adding the use of Reach 22B due to a land annexation of 517 acres into AVEK's service area (SWPAO #08060)

Napa County Flood Control and Water Conservation District.

Amendment Number 23 to the water supply contract between Napa County Flood Control and Water Conservation District (Napa) and DWR was executed on December 16, 2009. The amendment, effective January 1, 2010, will provide for an increase of 5,500 af to Table A amounts for an annual maximum amount of 29,025 af for the term of the contract. (SWPAO #09073)

Permanent Transfer of Table A Amounts

Permanent transfers of Table A amounts may occur in pairs; one SWP contractor's Table A amounts decrease by a designated amount, and another SWP contractor's Table A amounts increase by the same amount. The following such permanent transfers occurred in 2009.

Dudley Ridge Water District. DWR executed Amendment Number 26 to the water supply contract between Dudley Ridge Water District (Dudley Ridge) and DWR on October 12, 2009. The amendment becomes effective January 1, 2010, and provides for a total permanent transfer of 14,000 af to decrease Dudley Ridge's Table A amounts under the following schedule: in 2010, 7,000 af will be transferred; January 1, 2015, an additional 3,000 af will be transferred; and on January 1, 2020, the remaining 4,000 af will be transferred. By this amendment, Dudley Ridge's maximum Table A is reduced to 50,343 af for 2010–2014, is reduced to 47,343 af during 2015–2019, and is finally reduced to establish a new maximum Table A in 2020 of 43,343 af for the term of the contract. (SWPAO #09069)

Mojave Water Agency. DWR executed Amendment Number 20 to the water supply contract between Mojave Water Agency (Mojave) and DWR on October 12, 2009. The amendment provides for a total permanent transfer of 14,000 af to increase Mojave's Table A amounts effective January 1, 2010, under the following schedule: in 2010, 7,000 af will be

transferred; on January 1, 2015, an additional 3,000 af will be transferred; and on January 1, 2020, the remaining 4,000 af will be transferred. By this amendment, Mojave's maximum Table A is increased to 82,800 af for 2010–2014, is increased to 85,300 af from 2015–2019, and is finally increased to establish a new maximum Table A in 2020 of 89,800 af for the term of the contract. (SWPAO #09070)

Monterey Amendments

The Monterey Amendments increase the reliability of existing water supplies, and increase water management flexibility, providing more tools for local water agencies to maximize use of existing facilities.

The Monterey Amendments include changes in allocation of Table A water, the transfer of Table A amounts and land, financial restructuring, and increased operational flexibility. The Monterey Amendments are discussed in detail in Chapter 1, Summary of Significant Events, Bulletin 132-95, found on the DWR website.

Plumas County Flood Control and Water Conservation District (Plumas) and Empire-West Side Irrigation District (Empire) remain as the only long-term SWP water contractors who have not signed the Monterey Amendments.

In accordance with the terms of the May 5, 2003, Monterey Settlement Agreement, the SWP continues to operate pursuant to the Monterey Amendments, while the new environmental impact report (EIR) is being prepared. The draft EIR was released in October 2007 and is available online at DWR's website. The final EIR is expected to be released in early 2010. The settlement agreement is discussed in detail in Chapter 9, Water Contracts and Deliveries, Bulletin 132-04 (available online at DWR's website).

See Chapter 6, Legislation and Litigation, for the current status of the Monterey Amendment litigation.

Miscellaneous Agreements with Long-term SWP Water Contractors

2009 Water Conveyance and Exchange Agreements

Water conveyance and exchange agreements that were executed or pending execution with long-term SWP water contractors during 2009 are described below.

Alameda County-Zone 7

A long-term change in point of delivery agreement, executed October 13, 2009 among DWR, Alameda County-Zone 7 (Alameda-Zone 7), and Kern County Water Agency (Kern) provides for a portion of Alameda-Zone 7's SWP water supplies to be delivered to Kern's service area for the Cawelo Water Banking and Exchange Program. The agreement provides for deliveries to Cawelo through December 31, 2020, with stored water to be returned by December 31, 2035. No water was conveyed under this agreement during 2009. (SWPAO #06010)

Alameda County Water District

A point of delivery agreement, executed May 21, 2009, among DWR, Alameda County Water District (Alameda County), and Kern provides for Alameda County's 2007 SWP water supplies to be delivered to Kern's service area for the Semitropic Water Banking and Exchange Program. The agreement provides for deliveries to Semitropic through December 31, 2007, with stored water to be returned by December 31, 2035. No water was conveyed under this agreement during 2009. (SWPAO #07005)

Antelope Valley-East Kern Water Agency

A letter agreement executed among DWR, AVEK, and Kern provided for conveyance of up to 8,393 af of pre-1914, non-SWP water acquired by AVEK through Tejon Ranchcorp

and Nickel Farms LLC. The non-SWP water was conveyed to AVEK either by in-lieu exchange of Kern's Table A water for a like amount of Nickel's water or by direct pump-in to the California Aqueduct for conveyance under Article 55 of AVEK's long-term water supply contract. A total of 8,393 af was delivered to complete the agreement. (SWPAO #08061)

A letter agreement dated July 14, 2009, and fully executed September 14, 2009, provided for DWR to convey up to 6,393 af of pre-1914 Nickel Farms LLC water to AVEK through December 31, 2010. A total of 6,393 af was delivered under this agreement in 2009 to complete the agreement. (SWPAO #09005)

Coachella Valley Water District

A change in point of delivery agreement executed September 17, 2009, among DWR, Coachella Valley Water District (Coachella), and Kern for conveyance of up to 10,000 af of either: (a) a portion of Kern's Table A; or (b) non-SWP water from Kern's service area to Coachella under Article 55 of Coachella's long-term water supply contract. Coachella took delivery of this water via its exchange agreement for Colorado River water with Metropolitan Water District of Southern California (Metropolitan). The agreement, upon execution, will be effective until December 31, 2010. A total of 3,000 af was conveyed during 2009 pursuant to this agreement. (SWPAO #07022)

Crestline-Lake Arrowhead Water Agency

A letter agreement dated December 30, 2009, and executed on December 8, 2009, among DWR, Crestline-Lake Arrowhead Water Agency (Crestline) and San Bernardino Valley Municipal Water District (San Bernardino) provided for a long-term exchange of up to 1,000 af of Crestline's 2009 Table A to San Bernardino. San Bernardino will return up to 650 af to Crestline from its future allocation of Table A water by December 31, 2018. This agreement is an unequal exchange only, with

no monetary consideration. DWR delivered a total of 1,000 af of Crestline's Table A water to San Bernardino's service area during 2009. (SWPAO #09079)

Dudley Ridge Water District

A point of delivery agreement executed September 28, 2009, among DWR, Dudley Ridge, and Kern provided for a portion of Dudley Ridge's approved SWP water supplies to be delivered to Kern's service area for the Kern Water Bank Groundwater Banking and Exchange Program. Dudley Ridge will provide water for conveyance to storage through December 31, 2020, with stored water to be returned by December 31, 2035. No water was conveyed under this agreement during 2009. (SWPAO #08050)

A letter agreement dated April 23, 2009, and executed May 12, 2009, among DWR, Dudley Ridge, and Kern will provide for the transfer of up to 12,000 af of Dudley Ridge's 2009 Table A water to be delivered to Kern on behalf of a landowner, Sandridge Partners, who farms in the Dudley Ridge and Kern service areas. Sandridge Partners will transfer up to 3,500 af to Belridge Water Storage District, up to 600 af to Berrenda Mesa Water District, up to 7,500 af to Lost Hills Water District, and up to 400 af to Semitropic Water Storage District (Semitropic). During 2009, a total of 7,800 af was delivered under this agreement. (SWPAO #09035)

An agreement executed November 3, 2009 among DWR, Dudley Ridge, and Kern approved the delivery of a portion of Dudley Ridge's non-SWP water supplies currently stored in the Kern Water Bank Groundwater Banking Program either by pump-in or by exchange of Kern's Table A. This agreement is effective through December 31, 2013. Dudley Ridge recovered a total of 11,428 af in 2009 under this agreement. (SWPAO #09040)

A letter agreement dated June 10, 2009, and executed June 23, 2009, between DWR and Dudley Ridge approved the transfer of up to 600 af of its 2009 Table A water to Westlands Water District (Westlands) for Kettleman Hills Fruit Growers who farms in Dudley Ridge and Westlands service areas. An amendment dated August 17, 2009, and executed August 19, 2009, approved an additional 800 af, for a total of up to 1,400 af, which was the total delivered in 2009 by DWR. (SWPAO #09065 & #09065-A)

Empire-West Side Irrigation District

A contract executed March 30, 2009, between DWR and Empire-West Side Irrigation District (Empire), provides for delivery of unscheduled water to Empire in 2009 at times when SWP water is not needed for fulfilling Table A deliveries or for meeting project operational commitments. No unscheduled water was available for delivery to Empire during 2009. (SWPAO #09001)

A letter agreement dated May 4, 2009, and executed May 20, 2009, between DWR and Empire approved the transfer of up to 1,000 af of Empire's 2009 Table A water to Westlands on behalf of Brooks Farms, which farms in both Empire's and Westlands' service areas. DWR petitioned for and received approval from the State Water Resources Control Board (SWRCB) for a temporary change in place of use. A total of 870 af of Empire's Table A water was delivered to Westlands during 2009. (SWPAO #09033)

Kern County Water Agency

An amendment dated July 20, 2009, and executed September 3, 2009, to a letter agreement between DWR and Kern allowed for the delivery of up to 5,506 af of Kern's SWP water supplies to the Fresno County portion of Westlands' service area until May 18, 2010, which is outside the SWP place of use. SWRCB Order WR 2009-0033, adopted on May 19, 2009, approved the

consolidated place of use to meet urgent drought needs. Previously, a letter agreement (SWPAO #05020) dated July 19, 2006, and executed September 25, 2006, between DWR and Kern provided for the delivery of up to 25,000 af of Westlands' Central Valley Project (CVP) water to be delivered to Kern for storage in Semitropic effective from November 1, 2005, through April 15, 2006. The Bureau of Reclamation (Reclamation) provided the CVP water at O'Neill Forebay for DWR to convey Westlands' CVP water to Kern's service area. The agreement will terminate upon the return of all water to Westlands or by December 31, 2035. No water was returned to Westlands under this agreement during 2009. (SWPAO #05020-B)

An amendment, dated July 20, 2009 and executed September 3, 2009, to a letter agreement, provided for the delivery of up to 7,980 af of Kern's Table A water in the Fresno County portion of Westlands service area. The original agreement (SWPAO #06013) provided for delivery only in the Kings County portion of Westlands' service area. DWR petitioned and received approval from SWRCB for consolidation of the SWP and CVP places of use to meet urgent drought water needs. This amendment terminates May 18, 2010. A total of 6,063 af was delivered under this agreement in 2009. (SWPAO #06013-A)

A change in point of delivery agreement, executed February 10, 2009, among DWR, Kern, and Westlands for up to 6,214 af of Kern's 2007 Table A water. Kern's water was delivered to the Kings County portion of Westlands' service area, which is within the SWP place of use. This agreement allows for conveyance of nonproject water from Nickel Family, LLC to Westlands, by exchanging that water for a portion of Kern's 2007 Table A water. The agreement was effective from July 15, 2007, through December 31, 2008. A total of 6,214 af was delivered to Westlands during 2007. (SWPAO #07023)

A letter agreement dated January 21, 2009, and executed March 11, 2009, between DWR and Kern provides for the conveyance of up to 50,000 af of Westlands' 2008–2009 CVP water by DWR to Semitropic in exchange for a like amount of water to be returned by December 31, 2019. Reclamation would make Westlands' water available at O'Neill Forebay and DWR would provide conveyance of the water to Semitropic in Kern's service area. No water was moved under this agreement in 2009. (SWPAO #08007)

A letter agreement dated September 8, 2008, and executed May 12, 2009, between DWR, Kern and Oak Flat Water District (Oak Flat) will facilitate a multipart return of water previously banked in Kern's service area by Westlands. Kern would provide up to 650 af of its 2008 Table A to be delivered to Oak Flat as transfer water from Westlands, who in turn would provide its water stored in Semitropic by exchange to Kern. DWR conveyed 650 af to Oak Flat in 2008; no water was conveyed in 2009. (SWPAO #08053)

A letter agreement dated December 12, 2008, and executed January 13, 2009, between DWR and Kern, effective through August 31, 2009, provides for the return by exchange of 100 af for the City of Tracy's CVP water previously delivered to Semitropic in Kern's service area under the Semitropic Banking and Exchange Program. DWR conveyed 100 af of Kern's Table A water only during 2008 to O'Neill Forebay pursuant to this agreement, and none during 2009. (SWPAO #08056)

A letter agreement dated December 12, 2008, and executed January 30, 2009, between DWR and Kern will provide for the conveyance of up to 21,320 af of 2008–2009 CVP water under Article 55 to Kern from two Cross Valley Canal contractors, Kern-Tulare Water District (Kern-Tulare) and Rag Gulch Water District (Rag Gulch), in exchange for a like amount of Kern's Table A water. During

2008, Kern-Tulare and Rag Gulch made available 5,400 af and 1,320 af, respectively, of CVP water for Kern pursuant to this agreement, but no water was made available during 2009 for conveyance. (SWPAO #08058)

A letter agreement dated October 7, 2009, and fully executed November 20, 2009, among DWR, Kern, and Westlands approved a transfer of up to 1,000 af of pre-1914 St. Johns River water to Kern in exchange for a like amount of Kern's 2009 Table A water to be delivered to the Kings County portion of Westlands' service area. The agreement will terminate on February 28, 2010. No water was moved under this agreement during 2009. (SWPAO #09072)

Littlerock Creek Irrigation District

A letter agreement dated and executed December 30, 2009, among DWR, Littlerock Creek Irrigation District (Littlerock), and AVEK, provided for the long-term exchange of up to 920 af of SWP Table A between Littlerock and AVEK. AVEK will return an equal amount of its future allocation of Table A water by December 31, 2019. This agreement is a 1:1 af exchange only, with no monetary consideration. DWR delivered a total of 920 af of Littlerock's Table A water to AVEK's service area during 2009. (SWPAO #09081)

DWR approved the temporary diversion of Littlerock's 42 af of 2009 Tier 3 Yuba Accord water through Palmdale Water District (Palmdale)'s turnout at Milepost 346.98, Reach 20B, by a letter dated October 9, 2009. The purpose of the diversion was for water treatment and conveyance by Palmdale for subsequent delivery and use in Littlerock's service area. An existing agreement between Palmdale and Littlerock, "Littlerock Creek Dam and Reservoir – Rehabilitation, Operation and Maintenance Agreement," dated December 22, 1992, provides for water conveyance. DWR provided approval for

this action under Articles 10(a) and (c) of Littlerock's water supply contract, with the understanding that Littlerock's water will ultimately be delivered to, and used within, its service area. This water was classified between July 1, 2009, and December 31, 2009. (SWPAO #09078)

Metropolitan Water District of Southern California

An exchange agreement, executed December 7, 2009, among DWR, Metropolitan, and Mojave provided for delivery of up to 75,000 af of Metropolitan's 2003–2005 SWP water supplies for temporary storage in the Mojave River Basin within Mojave's service area. Water stored under this agreement shall be returned to Metropolitan by December 31, 2015. No water was returned under this agreement in 2009. (SWPAO #03057)

An agreement dated and executed June 17, 2009, among DWR, Metropolitan, and Delta Wetlands Properties, for conveyance of 2009 transfer water. Delta Wetlands Properties would make available up to 17,941 af of water for transfer to Metropolitan, by withholding irrigation water from idled agricultural acreage on Bouldin Island and Webb Tract, located in the Delta. DWR conveyed 1,568 af to Metropolitan in 2009, which completed the agreement. (SWPAO #09038)

An agreement dated and executed September 13, 2009, among DWR, Metropolitan, and Placer County Water Agency (Placer) for storage and conveyance of 2009 transfer water. DWR would provide temporary storage and conveyance of up to 20,000 af of Placer's water purchased by San Diego County Water Authority (San Diego), a member agency of Metropolitan. The agreement was effective from August 1, 2009, until June 30, 2010. A total of 15,520 af was conveyed by DWR in 2009 for San Diego via Metropolitan to complete the agreement. (SWPAO #09074)

San Gorgonio Pass Water Agency

A letter agreement dated March 11, 2009, and executed May 4, 2009, among DWR, San Gorgonio Pass Water Agency (San Gorgonio), and San Bernardino provided for an exchange of up to 1,000 af of San Gorgonio's 2008 Table A water to San Bernardino by December 31, 2008, and for San Bernardino to return an equal amount to San Gorgonio from its future Table A supply by December 31, 2011. This agreement is a 1:1 af exchange only with no monetary consideration. DWR provided conveyance of 1,000 af of San Gorgonio's 2008 Table A to San Bernardino, and during 2009, San Bernardino made available 300 af of its 2009 Table A for conveyance to San Gorgonio. (SWPAO #08064)

Santa Clara Valley Water District

A change in point of delivery agreement, executed January 20, 2009, among DWR, Santa Clara Valley Water District (Santa Clara), and Kern provides for Santa Clara's 2007 SWP water supplies to be delivered to Kern's service area for the Semitropic Water Banking And Exchange Program. The agreement provides for deliveries to Semitropic through December 31, 2007 with stored water to be returned by December 31, 2035. No water was conveyed under this agreement in 2009. (SWPAO #06011)

A long term letter agreement dated September 12, 2008, was executed January 26, 2009, among DWR, Santa Clara, and Kern to provide for the conveyance of a portion of Santa Clara's 2008 CVP water to Semitropic, pursuant to Article 55 of Santa Clara's long-term water supply contract. Kern's Table A water will be exchanged for recovery of Santa Clara's stored CVP supplies in future years through December 31, 2035. This agreement also acknowledges DWR's conveyance of CVP water in 2005 and 2006 to Semitropic. A total of 3,681 af was conveyed for storage in 2008. No water was recovered by Santa Clara through exchange

of Kern's Table A from Semitropic, pursuant to this agreement, during 2008 or 2009. (SWPAO #06012)

A letter agreement dated April 8, 2009, and executed May 29, 2009, between DWR, Santa Clara and Kern provided approval to conduct an intrabank transfer in 2009 of up to 10,000 af of Santa Clara's Article 21 water stored in Semitropic Water Bank in 2005 and 2006 to Poso Creek Water Company. This transfer is consistent with the Governors's Executive Order #S-06-08 to facilitate and expedite water transfers due to drought conditions. In 2009, Santa Clara had 583 af of 2005 water and 9,417 af of 2006 water available in storage that met the conditions for transfer under this agreement. (SWPAO #09003)

A letter agreement dated May 11, 2009, and executed June 9, 2009, between DWR and Santa Clara approved the delivery of up to 50,000 af of SWP water supplies to Santa Clara. In exchange, Reclamation would make an equal amount of Santa Clara's 2009 CVP water supplies available to DWR at O'Neill Forebay. DWR would deliver the CVP water to SWP service areas south of O'Neill Forebay. DWR petitioned and received approval from SWRCB for a change in place of use. A total of 1,000 af of SWP water was delivered to Santa Clara during 2009 in exchange for a like amount of CVP water. (SWPAO #09039)

A letter agreement dated August 27 and executed October 30, 2009, among DWR, Santa Clara, and Kern approved a one time transfer of up to 2,000 af of Kern's 2009 Table A water to Santa Clara as an in-lieu exchange for non-SWP water acquired by Santa Clara from Kern's service area. In 2009, DWR conveyed 2,000 af to Santa Clara under the terms of this agreement. (SWPAO #09064)

A letter agreement dated October 7, 2009, and executed December 22, 2009, between

DWR and Santa Clara approved the conveyance of up to 3,100 af of pre-1914 water rights water from Brown's Valley Irrigation District under Article 55 of Santa Clara's water supply contract. During 2009, 2,480 af was delivered to Santa Clara under this agreement. (SWPAO #09076)

Tulare Lake Basin Water Storage District

A letter agreement dated April 9, 2009, and executed April 15, 2009, between DWR and Tulare Lake Basin Water Storage District (Tulare) approved the transfer of up to 8,000 af of Tulare's 2009 Table A water to Westlands. The transfer was made on behalf of two landowners in Tulare's and Westlands' service areas: Hansen Ranches for up to 6,000 af, and Newton Farms for up to 2,000 af. DWR petitioned and received approval from SWRCB for a temporary change in place of use. During 2009, a total of 3,590 af of Tulare's Table A water was delivered to Westlands. (SWPAO #09004)

A letter agreement dated April 22, 2009, and executed April 27, 2009, between DWR and Tulare approved the transfer of up to 2,000 af of Tulare's 2009 Table A water to Westlands on behalf of Westlake Farms Inc., which farms in both Tulare's and Westlands' service areas. During 2009, a total of 600 af was delivered to Westlands for use on lands within the SWP place of use, the Kings County portion of Westlands' service area. (SWPAO #09006)

A letter agreement dated April 20, 2009, and executed June 10, 2009, between DWR and Tulare approved the transfer of up to 10,000 af of Tulare's 2009 Table A water to Kern. The transfer was made on behalf of the landowner, JG Boswell Company, who farms in both Tulare's and Kern's service areas. No water was delivered to Kern under this agreement in 2009. (SWPAO #09034)

A letter agreement dated June 19, 2009, and executed July 9, 2009, between DWR

and Tulare approved the transfer of up to 4,000 af of Tulare's 2009 Table A water to Kern. The transfer was made on behalf of landowner, Sandridge Partners, who farms in both Tulare's and Kern's service areas. During 2009, a total of 2,330 af of Tulare's Table A water was delivered to Kern. (SWPAO #09063)

Water Conveyance and Exchange Agreements Prior to 2009

Castaic Lake Water Agency

By a letter dated June 2, 1994, DWR recognized the long-term agreement *Wheeling of SWP Water and other Allocated Water to Castaic Lake Water Agency* (Castaic Lake) between Castaic Lake and Metropolitan for the conveyance of Castaic Lake's SWP water supplies through Metropolitan's Foothill Feeder. Metropolitan will convey Castaic Lake's water to the Rio Vista Water Treatment Plant in Castaic's service area. During 2009, DWR delivered to Metropolitan's turnout facility 21,095 af of Castaic Lake's approved SWP water supplies: 4,700 af was Article 56(c) water and 9,477 af was Table A water. (SWPAO #94001)

An agreement executed February 5, 2008, among DWR, Castaic Lake, and Kern provides for the long-term annual conveyance of up to 11,000 af of non-SWP Kern River water from Buena Vista Water Storage District (Buena Vista), a member unit of Kern, to Castaic Lake. The Kern River water will be provided to Castaic Lake either by a change in point of delivery of a portion of Kern's Table A water in exchange for a like amount of Buena Vista's water or by direct pump-in to the California Aqueduct. The Kern River water was conveyed under Article 55 of Castaic Lake's long-term water supply contract. A total of 11,000 af was delivered under this agreement during 2009. (SWPAO #07008)

County of Kings

A long-term change in point of delivery agreement, executed March 10, 2006, among DWR, County of Kings (Kings), and Tulare will provide for the delivery of up to 200 af of Kings' annual Table A water and other SWP water supplies to Westlands' service area. The water is conveyed to GWF Energy LLC, for use within the SWP place of use, Kings County service area. During 2009, 13 af was delivered to Westlands' turnouts. (SWPAO #02031)

A long-term change in point of delivery agreement, executed March 24, 2004, among DWR, Kings, and Westlands provides for the delivery of up to 5,000 af of Kings' annual Table A water through Westlands' turnouts for use at Lemoore Naval Air Station. The agreement is effective from January 1, 2004, through December 31, 2035. During 2009, DWR delivered a total of 1,612 af of Kings' water to Westlands' turnouts, which included 12 af of Article 56(c) water and 1,600 af of Table A water. (SWPAO #04005)

A long-term change in point of delivery agreement executed May 6, 2008, among DWR, Kings, and Westlands provides for Kings' approved SWP water supplies to be conveyed to specified Westlands' turnouts in the California Aqueduct. This agreement defines Westlands' turnouts to be used during the term of the agreement, January 1, 2007, through December 31, 2035. Kings requested the water for use on Westlands' agricultural lands within Kings' service area. During 2009, DWR conveyed 1 af of Turn-Back Pool A water and 2 af of Turn-Back Pool B water of Kings' Table A water through Westlands turnouts pursuant to this agreement. (SWPAO #07010)

Crestline-Lake Arrowhead Water Agency

A point of delivery agreement executed April 17, 2008, among DWR, Crestline, and San Bernardino provides for an emergency water supply totaling 7,600 af to Lake Arrowhead

Water Community Services District effective from January 1, 2007, through December 31, 2020, or until all water has been delivered pursuant to this agreement. Prior to 2009, 1,129 af was supplied to Crestline by San Bernardino pursuant to this agreement. During 2009, Crestline received 149 af from San Bernardino. (SWPAO #07025)

Dudley Ridge Water District

A letter agreement dated March 13, 2005, and executed April 24, 2006, among DWR, Dudley Ridge and Kern provided for delivery to Kern of up to 12,000 af from Dudley Ridge's 2005 Table A water. Kern will return a portion of its Table A water, equal to two-thirds (66.7 percent) of Dudley Ridge's water, 6,998 af, delivered to Kern in 2005 by December 31, 2018. Kern provided 2,000 af in 2007 and 2,667 af in 2009, to complete the agreement. (SWPAO #05015)

Kern County Water Agency

A long-term point of delivery agreement executed on June 8, 2000, between DWR and Kern, provided approval for the delivery of a portion of Kern's annual Table A water to Western Hills Water District (Western Hills). In exchange, Kern will take a like amount of banked local water from the Pioneer Groundwater Bank. SWRCB approved Western Hills' service area to be included within the authorized SWP place of use on April 21, 2000. During 2009, a total of 1,169 af of Kern's Table A water was delivered to Western Hills. (SWPAO #01001)

Mojave Water Agency

A long-term change in point of delivery agreement executed November 13, 1997, among Mojave, AVEK, and DWR, and effective through December 31, 2019, allows for delivery of up to 2,250 af of Mojave's annual Table A amount to AVEK. Mojave does not have conveyance facilities to provide service to a solar energy generating station located within its service area. AVEK does have conveyance capability,

and has agreed to provide water service on Mojave's behalf. During 2009, DWR delivered 1,108 af of Mojave's Table A water to AVEK's Fairmont Turnout in Reach 19 of the California Aqueduct. (SWPAO #97003)

Napa County Flood Control and Water Conservation District

A change in point of delivery agreement executed December 26, 2001, among DWR, Napa County Flood Control and Water Conservation District (Napa), and Solano County Water Agency (Solano), approved the delivery of up to 628 af of Napa's annual Table A water to the City of Vallejo Water Treatment Plant in Solano's service area of the North Bay Aqueduct. This water is further conveyed to the City of American Canyon, a member agency of Napa. The agreement is effective until December 31, 2035. A total of 27 af of Napa's 2009 Table A water was delivered to Solano's turnouts. (SWPAO #00029)

Palmdale Water District

An agreement dated and executed July 8, 2008, among DWR, Palmdale, and County of Butte (Butte) provides approval for the delivery of up to 8,750 af of Butte's 2008 Table A water and possibly a portion of its 2009 Table A allocation to Palmdale. Approval for delivery of Butte's 2009 Table A water to Palmdale was contingent upon final 2008 allocations and 2009 Table A allocations available through December 31, 2009. This transfer is consistent with the Governor's Executive Order #S-06-08 to facilitate and expedite water transfers due to drought conditions. Butte provided 8,749 af of its 2008 Table A and 9,625 af of its 2009 Table A for conveyance by DWR to Palmdale. (SWPAO #08011)

San Luis Obispo County Flood Control and Water Conservation District

An agreement executed July 22, 2008, among DWR, Santa Barbara County Flood Control

and Water Conservation District (Santa Barbara), and San Luis Obispo County Flood Control and Water Conservation District (San Luis Obispo), provides approval for the delivery of up to 5,200 af of San Luis Obispo's 2008 Table A water and possibly a portion of its 2009 Table A allocation to Santa Barbara. Approval for delivery of San Luis Obispo's 2009 Table A water to Santa Barbara is contingent upon final 2008 allocations and 2009 Table A allocations available through December 31, 2009. This transfer is consistent with the Governor's Executive Order #S-06-08 to facilitate and expedite water transfers due to drought conditions. The amount transferred to Santa Barbara from San Luis Obispo during 2008 was 5,110 af, and 2009 Table A allocations provided for 5,924 af made available to Santa Barbara. (SWPAO #08047)

Solano County Water Agency

A letter agreement dated June 23, 1999, and executed July 9, 1999, among DWR, Solano, and Mojave, provided for the transfer of up to 3,000 af of Solano's 1999 Table A water to Mojave and for the future return by exchange of Mojave's Table A water on a 2:1 basis by December 31, 2009. During 2009, 1,500 af of Mojave's Table A was conveyed to Solano's service area to complete this agreement. (SWPAO #99010)

A settlement agreement, which includes conveyance service by Solano, was executed May 19, 2003, among DWR, Solano, and the cities of Fairfield, Vacaville, and Benicia. The agreement provides for delivery through December 31, 2035, of up to 31,620 af per year of settlement water to Solano for delivery to the three cities to help meet their current and future municipal and industrial water needs through the North Bay Aqueduct. During 2009, a total of 9,376 af of settlement water was delivered to Solano for conveyance to the three cities. (SWPAO #03017)

Turnout Agreements

County of Butte

On January 20, 2009, DWR executed an amendment to the existing October 25, 1969, agreement between the County of Butte and California Water Service Company for modifications to the existing California Water Service Company Turnout, located at Engineer's Station POT 29+00 of the Thermalito Power Canal. Modifications include the installation of a second pump (to increase the capacity from 6.24 cubic feet per second (cfs) to 17.38 cfs), a new generator, and a new transformer.

San Geronio Pass Water Agency

On May 27, 2009, DWR executed an agreement with San Geronio Pass Water Agency (San Geronio) for construction of the Beaumont-Cherry Valley Water District Turnout Number 1. The turnout is located at Station 697+90 of the East Branch Extension and has a design capacity of 20 cfs.

Activities Related to the Monterey Amendments

Storage of Water Outside SWP Contractor Service Area

Pursuant to Article 56(c) of the Monterey Amendments, six SWP water contractors have separate agreements with DWR to convey approved water supplies outside their service areas for storage in existing and operational groundwater storage programs and for future recovery of water to use within their service areas. These types of agreements, effective or pending execution during 2009, are listed in Table 9-1. The change in point of delivery agreements include provisions for conveyance to and from storage, recovery methods by exchange and/or pump-in to the California Aqueduct. During 2009, a total of 193,466 af was recovered from storage. A total of 139,043 af was conveyed to the participating contractors' service areas and the remaining

54,423 af was placed in temporary storage in SWP facilities.

Turn-Back Water Pool Program

Pursuant to Article 56(d) of the Monterey Amendments, the Turn-Back Water Pool Program was initiated through "Notice to State Water Project Contractors, No. 09-01," dated February 11, 2009. All SWP water contractors who have signed the Monterey Amendments were permitted to participate in the program. The program allowed SWP water contractors to offer a portion of their approved 2009 Table A water for sale in a turn-back pool for use by interested SWP water contractors. Based on Table A supply and demand, the turn-back water pool water was allocated among the purchasing contractors.

Initial offers for sales of Pool A and Pool B of the Turn-Back Water Pool Program occurred in February and March 2009, respectively, with 750 af purchased under Pool A, and 1,250 af purchased under Pool B. Pool A turn-back water sold for \$17.49 per af (50 percent of the 2009 Delta Water Rate). Pool B turn-back water sold for \$8.74 per af (25 percent of the 2009 Delta Water Rate). The 2009 Turn-Back Water Pool Program closed on June 1, 2009. Notices to State Water Project Contractors describing the Turn-Back Water Pool Program are available online at DWR's website.

Table 9-2 lists SWP water contractors who participated in Pool A and Pool B of the 2009 Turn-Back Water Pool Program.

Article 21 Water Program

Pursuant to the Monterey Amendments, Article 21 water replaces surplus, wet weather, and Article 12(d) water. The Article 21 Water Program allows an SWP water contractor to take delivery of water over the approved and scheduled Table A amounts for the current year. Article 21

Table 9-1 Storage of Water Outside SWP Contractor Service Areas in 2009 (Acre-feet)

| Contractor | Contract Status | Storage Provider | To Storage In 2009 | From Storage In 2009 | Return By |
|--------------------------|-------------------|--------------------|--------------------|----------------------|-----------|
| Alameda-Zone 7 | | | | | |
| SWPAO #99018 | Continuing | Semitropic | 0 | 0 | 2035 |
| SWPAO #00037 | Continuing | Semitropic | 0 | 0 | 2010 |
| SWPAO #01035 | Continuing | Semitropic | 0 | 0 | 2011 |
| SWPAO #02010 | Continuing | Semitropic | 0 | 0 | 2012 |
| SWPAO #03008 | Continuing | Semitropic | 0 | 0 | 2013 |
| SWPAO #04017 | Pending | Semitropic | 0 | 0 | 2035 |
| SWPAO #06010 | Executed 10/13/09 | Cawelo | 0 | 0 | 2035 |
| Alameda County | | | | | |
| SWPAO #98015 | Completed | Semitropic | 0 | 2,982 | 2035 |
| SWPAO #99017 | Continuing | Semitropic | 0 | 101 | 2035 |
| SWPAO #00030 | Continuing | Semitropic | 0 | 0 | 2035 |
| SWPAO #07005 | Executed 5/21/09 | Semitropic | 0 | 0 | 2035 |
| Castaic Lake | | | | | |
| SWPAO #02015 | Continuing | Semitropic | 0 | 4,950 | 2012 |
| SWPAO #03060 | Continuing | Semitropic | 0 | 0 | 2014 |
| SWPAO #05016 | Continuing | Rosedale-Rio Bravo | 0 | 0 | 2035 |
| Dudley Ridge | | | | | |
| SWPAO #07001 | Completed | Kern Water Bank | 0 | 5,589 | 2035 |
| SWPAO #08050 | Executed 9/28/09 | Kern Water Bank | 0 | 0 | 2035 |
| SWPAO #09040 | Executed 11/3/09 | Kern Water Bank | 0 | 11,428 | 2013 |
| Metropolitan | | | | | |
| SWPAO #95010 | Continuing | Semitropic | 0 | 65,499 | 2035 |
| SWPAO #01013 | Continuing | Arvin-Edison | 0 | 56,448 | 2035 |
| SWPAO #03019 | Continuing | Kern-Delta | 0 | 13,016 | 2035 |
| SWPAO #03057 | Executed 12/7/09 | Mojave | 0 | 0 | 2015 |
| Santa Clara | | | | | |
| <i>SWP Water</i> | | | | | |
| SWPAO #97020 | Completed | Semitropic | 0 | 12,000 | 2035 |
| SWPAO #98016 | Completed | Semitropic | 0 | 21,420 | 2035 |
| SWPAO #99016 | Continuing | Semitropic | 0 | 33 | 2035 |
| SWPAO #06031 | Continuing | Semitropic | 0 | 0 | 2035 |
| SWPAO #06032 | Continuing | Semitropic | 0 | 0 | 2035 |
| SWPAO #06011 | Executed 1/20/09 | Semitropic | 0 | 0 | 2035 |
| <i>Non-SWP Water</i> | | | | | |
| SWPAO #06012 | Executed 1/26/09 | Semitropic | 0 | 0 | 2035 |
| Total^a | | | 0 | 193,466 | |

^a Total acre-feet indicates all water recovered from various water banks. Some of recovered water may be temporarily stored in SWP facilities.

Table 9-2 2009 Turn-Back Water Pool Program (Acre-feet)

| Contractor | Sold | Purchased |
|----------------|--------------|--------------|
| Pool A | | |
| Ventura | 750 | |
| Alameda County | | 8 |
| AVEK | | 29 |
| Castaic | | 19 |
| Coachella | | 25 |
| Desert | | 10 |
| Dudley Ridge | | 12 |
| Kern | | 203 |
| Kings | | 2 |
| Metropolitan | | 388 |
| Napa | | 5 |
| Oak Flat | | 1 |
| Santa Barbara | | 9 |
| Santa Clara | | 20 |
| Tulare | | 19 |
| Total | 750 | 750 |
| Pool B | | |
| Ventura | 1,250 | |
| AVEK | | 48 |
| Castaic | | 33 |
| Coachella | | 41 |
| Desert | | 17 |
| Dudley Ridge | | 20 |
| Kern | | 341 |
| Kings | | 3 |
| Metropolitan | | 654 |
| Napa | | 8 |
| Oak Flat | | 2 |
| Santa Barbara | | 16 |
| Santa Clara | | 34 |
| Tulare | | 33 |
| Total | 1,250 | 1,250 |

water is only available for delivery on a short-term basis as determined by DWR when water is still available after operational requirements for SWP water deliveries, water quality, and Delta requirements are met.

Guidelines for the Article 21 Water Program for 2009 are described in the December 12, 2008, "Notice to State Water Project Contractors, No. 08-08," available online at DWR's website. Seventeen participants signed the notice, which indicated their acceptance of the criteria, procedures,

and charges for the program. During 2009, Article 21 water was only available to SWP contractors north of the Delta due to water conditions and storage amounts in San Luis Reservoir. A total of 6,032 af of Article 21 water was made available for Napa County to receive 1,588 af and Solano County to receive 4,444 af.

Flexible Storage Program

Pursuant to Article 54 of the Monterey Amendment, the flexible storage program provides SWP water contractors participating in the repayment of the capital costs of Castaic Lake and Lake Perris the option to withdraw water in excess of approved deliveries. The program objective is to provide additional flexibility to benefit local water management activities. Participating SWP water contractors are given 5 years to replace stored water withdrawn with approved SWP or non-SWP water.

Flexible storage allows for withdrawal of up to 160,000 af at Castaic Lake and 65,000 af at Lake Perris. SWP water contractors participating in the Castaic Lake flexible storage program include Metropolitan, Ventura County Watershed Protection District (Ventura), and Castaic Lake. Each contractor is allowed to withdraw up to a maximum of 153,940 af, 1,377 af, and 4,683 af, respectively. Metropolitan is the only SWP water contractor allowed to withdraw water from Lake Perris, up to a maximum of 65,000 af.

Metropolitan was the only participant in the flexible storage program in 2009 at Castaic Lake and Lake Perris. At the beginning of 2009, Metropolitan owed 74,602 af to Castaic Lake storage. During 2009, Metropolitan withdrew 77,911 af from storage in Castaic Lake, provided 152,513 af to storage, and ended 2009 with a zero balance. Metropolitan owed 4,124 af to Lake Perris storage. Metropolitan withdrew 39,642 af, provided no water to storage during 2009, and ended 2009 owing 43,766 af to Lake Perris storage.

Extended Carryover Program

Pursuant to Article 56 of the Monterey Amendments, SWP water contractors can elect to store SWP water outside of their service areas and carry it over to the following year for use within their service areas. Qualified contractors can request Table A water be carried over for delivery in the following year to the extent that such deliveries do not adversely affect current or future project operations. Factors that influence how much extended carryover water can be delivered include operational constraints of project facilities, filling of SWP conservation storage facilities, flood control releases, and water quality restrictions. If storage requests exceed the available storage capacity, the amount available is allocated among the SWP water contractors requesting storage in proportion to their annual Table A water for that year. Eighteen SWP water contractors took delivery of 179,020 af of approved 2008 Table A water carried over into 2009, as extended carryover.

2009 Drought Water Bank

Substantial areas of California continued to experience wide-ranging effects due to the third consecutive year of dry conditions. To assist agencies experiencing potential water supply shortages, DWR established a 2009 Drought Water Bank (DWB) consistent with the Governor's Executive Order #S-06-08, issued June 4, 2008, and his Emergency Proclamation of February 27, 2009. The emergency proclamation directed DWR and the SWRCB to facilitate and expedite water transfers.

In addition to establishing the DWB, DWR executed 21 agreements with 19 agencies for the sale of water to the 2009 DWB between May and October. Water was made available to the 2009 DWB through a combination of groundwater substitution, crop fallowing and/or crop shifting, and reservoir releases. DWR established a purchase price of \$275

per af for water made available to the DWB. Ultimately, 18 agencies provided water to the 2009 DWB. See Table 9-3.

Twelve water agencies executed agreements with DWR to purchase water from the 2009 DWB in April 2009, effective through December 31, 2010. Only nine of the agencies ultimately elected to purchase and take delivery of the DWB water. The purchase agreements provided for the allocation of available supply, provisions for storage, and conveyance of water by DWR. A total of 74,051 af was available for purchase to buyers, and 57,245 af was actually delivered after deductions for estimated Delta carriage water losses of 20 percent and an additional 2 percent or 3 percent is assumed for Delta Conveyance losses based on the reach to which the water is being delivered. See Table 9-4 for 2009 DWB buyer activity.

Environmental Water Account

The Environmental Water Account (EWA) was established in the CALFED Bay-Delta Program (CALFED) programmatic EIS/EIR record of decision. A cooperatively managed program, the EWA provides protection to the fish of the Bay-Delta Estuary through environmentally beneficial changes and increased flexibility in SWP and CVP coordinated operations while maintaining water supply reliability for SWP and CVP users.

Under the EWA, development of various water asset options, such as water banking, borrowing, transfers, and conveyance arrangements, allow stream flow and Delta outflow augmentation for fishery protection, restoration, and recovery. The EWA's water assets include SWP and CVP water export modifications during critical stages of fish life cycles and water supply replacement due to pumping reductions in the Delta.

Table 9-3 2009 Drought Water Bank Seller Activity (Acre-feet)

| Sellers | SWPAO # | Transfer Action | AF Available to DWB |
|---------------------------------|---------|-------------------------------|---------------------|
| Butte WD | 09-041 | Groundwater Substitution | 3,608 |
| City of Sacramento | 09-050 | Groundwater Substitution | 62 |
| Cordua ID | 09-056 | Groundwater Substitution | 7,270 |
| Garden Hwy MWC | 09-055 | Groundwater Substitution | 2,403 |
| Glenn-Colusa ID | 09-042 | Crop Idling | 6,843 |
| Pleasant Grove Verona MWC | 09-053 | Groundwater Substitution | 4,349 |
| Pelger Mutual WD | 09-057 | Groundwater Substitution | 1,443 |
| Reclamation District #108 | 09-047 | Groundwater Substitution | 1,273 |
| Reclamation District #108 | 09-067 | Crop Idling | 974 |
| Reclamation District #1004 | 09-059 | Groundwater Substitution | 4,841 |
| Richvale ID | 09-043 | Crop Idling | 7,021 |
| River Garden Farms | 09-048 | Groundwater Substitution | 3,434 |
| Sacramento River Ranch | 09-045 | Crop Idling | 122 |
| Sacramento River Ranch | 09-060 | Groundwater Substitution | 854 |
| Sacramento Suburban North WD | 09-051 | Groundwater Substitution | 4,986 |
| Sacramento Suburban South WD | 09-052 | Groundwater Substitution | 3,477 |
| South Sutter WD | 09-054 | Reservoir Re-Operation/GW Sub | 9,400 |
| Sutter Extension WD | 09-049 | Groundwater Substitution | 2,599 |
| Tule Basin Farms (Giusti Ranch) | 09-058 | Groundwater Substitution | 3,007 |
| Western Canal WD | 09-044 | Crop Idling | 6,085 |
| Total | | | 74,051 |

Table 9-4 2009 Drought Water Bank Buyer Activity (Acre-feet)

| Buyers | SWPAO # | AF Available to Buyer | Estimated Losses ^{a, b} | Net AF Delivered |
|----------------------------------|---------|-----------------------|----------------------------------|------------------|
| Avenal State Prison | 09-010 | 335 | 75 | 260 |
| Desert | 09-014 | 643 | 144 | 500 |
| Kern | 09-017 | 1,948 | 437 | 1,512 |
| Metropolitan | 09-018 | 36,900 | 8,265 | 28,635 |
| Napa ^c | 09-020 | 2,950 | 1,117 | 1,833 |
| San Bernardino | 09-023 | 1,797 | 403 | 1,394 |
| San Luis & Delta Mendota | 09-024 | 26,176 | 5,654 | 20,523 |
| Santa Clara | 09-025 | 3,267 | 704 | 2,561 |
| San Joaquin Valley Natl Cemetery | 09-027 | 35 | 8 | 27 |
| Total (rounded) | | 74,051 | 16,807 | 57,245 |

^a A 20 percent carriage cost is usually assumed.

^b An additional 2 percent or 3 percent is usually assumed for Delta Conveyance losses based on the reach to which the water is being delivered.

^c Due to Delta condition, Napa was not able to take full share of water during month of May.

Responsibility for implementing the EWA resides with the following five State and federal agencies (EWA agencies): the National Marine Fisheries Service (NOAA Fisheries), U.S. Fish and Wildlife Service (USFWS), and the Department of Fish and Wildlife (DFW; formerly the Department of Fish and Game), which are management agencies; and with Reclamation and DWR (project agencies).

The EWA Operating Principles Agreement was originally executed among the five State and federal agencies in 2000. In 2004, the agreement was extended through December 31, 2007. No further extensions of the EWA occurred beyond 2007, however federal authorization continues through 2014.

In 2008, the five EWA agencies released the Final Supplemental EIS/EIR evaluating the effects associated with extending the EWA through 2011. However, in late 2008, DWR and Reclamation, lead agencies for the EIS/EIR, suspended work on the longer-term EWA program.

DWR has not purchased any water for the EWA since executing the Lower Yuba River Accord Water Purchase Agreement in 2007. However, for fishery purposes, prepaid annual water deliveries to DWR totaling 60,000 af will continue through 2015, consistent with past EWA operations.

Lower Yuba River Accord

The Lower Yuba River Accord's (Yuba Accord) purpose is to resolve instream flow issues and protect and enhance lower Yuba River fisheries and local water supply reliability. The Yuba Accord provides revenues for local flood control and water supply projects, water to enhance SWP and CVP water supply reliability by offsetting Delta export reductions for protection and restoration of Delta fisheries, and improvements in statewide water supply management, including dry year supplies for participating SWP and CVP contractors.

The Yuba Accord is based upon three agreements, as follows:

- (1) a water purchase agreement between DWR and Yuba County Water Agency (Yuba), including water to help offset Delta export reductions and dry year water for participating SWP and CVP contractors;
- (2) conjunctive use agreements with Yuba member units; and
- (3) a fisheries agreement.

These agreements were executed in late 2007 and early 2008. The SWRCB approved the Yuba Accord in March 2008, which set flow schedules for the Yuba River and authorized accord-based water transfers through 2015.

The water purchase agreement transfers water to help offset Delta export reductions annually and provides dry year transfer water for SWP and CVP contractors from surface and groundwater substitution sources.

Yuba Accord water contracted by DWR pursuant to the water purchase agreement continues to be used to help offset Delta export reductions to benefit fish, consistent with past EWA operations. DWR has executed 22 agreements under the Yuba Accord for dry year supplies with participating SWP and CVP contractors. In 2008 and 2009, a total of 166,086 af and 180,000 af, respectively, was transferred to DWR and participating SWP and CVP contractors.

Yuba delivered 60,000 af of Component 1 water to help offset Delta export pumping reductions to benefit fish.

Table 9-5 shows year-end water accounting indicating the following delivery amounts for the 180,000 af total for 2009: dry year water totaling 120,000 af comprised 15,000 af of Component 2 water, 16,100 af

Table 9-5 Lower Yuba River Accord Water Deliveries, 2009 (Acre-feet)**1 of 3**

| Contractor | Purchased | Estimated Carriage and Conveyance Losses^{a, b} | Net Amount | Delivered |
|--------------------------|------------------|--|-------------------|------------------|
| Component 2 Water | | | | |
| Alameda-Zone 7 | 159 | 34 | 125 | 125 |
| AVEK | 278 | 62 | 216 | 216 |
| Castaic Lake | 187 | 42 | 145 | 145 |
| Coachella | 238 | 53 | 185 | 185 |
| Kings | 18 | 4 | 14 | 14 |
| Desert | 98 | 22 | 76 | 76 |
| Dudley Ridge | 113 | 25 | 88 | 88 |
| Empire | 0 | 0 | 0 | 0 |
| Kern | 1,965 | 440 | 1,525 | 1,525 |
| Littlerock | 5 | 1 | 4 | 4 |
| Napa | 46 | 10 | 36 | 36 |
| Oak Flat | 11 | 2 | 9 | 9 |
| Palmdale | 0 | 0 | 0 | 0 |
| San Bernardino | 202 | 45 | 157 | 157 |
| San Geronio | 34 | 8 | 26 | 26 |
| San Luis & Delta-Mendota | 7,500 | 1,620 | 5,880 | 5,880 |
| Santa Clara | 197 | 43 | 154 | 154 |
| Metropolitan | 3,760 | 842 | 2,918 | 2,918 |
| Tulare | 189 | 42 | 147 | 147 |
| Total | 15,000 | 3,295 | 11,705 | 11,705 |
| Component 3 Water | | | | |
| Alameda-Zone 7 | 170 | 37 | 133 | 133 |
| AVEK | 298 | 67 | 231 | 231 |
| Castaic Lake | 201 | 45 | 156 | 156 |
| Coachella | 256 | 57 | 199 | 199 |
| Kings | 20 | 4 | 16 | 16 |
| Desert | 106 | 24 | 82 | 82 |
| Dudley Ridge | 121 | 27 | 94 | 94 |
| Empire | 0 | 0 | 0 | 0 |
| Kern | 2,109 | 472 | 1,637 | 1,637 |
| Littlerock | 6 | 1 | 5 | 5 |
| Napa | 49 | 11 | 38 | 38 |

Table 9-5 Lower Yuba River Accord Water Deliveries, 2009 (Acre-feet)**2 of 3**

| Contractor | Purchased | Estimated Carriage and Conveyance Losses^{a,b} | Net Amount | Delivered |
|--------------------------|------------------|---|-------------------|------------------|
| Oak Flat | 12 | 3 | 9 | 9 |
| Palmdale | 0 | 0 | 0 | 0 |
| San Bernardino | 217 | 49 | 168 | 168 |
| San Geronio | 36 | 8 | 28 | 28 |
| San Luis & Delta-Mendota | 8,050 | 1,739 | 6,311 | 6,311 |
| Santa Clara | 211 | 46 | 165 | 165 |
| Metropolitan | 4,036 | 904 | 3,132 | 3,132 |
| Tulare | 202 | 45 | 157 | 157 |
| Total | 16,100 | 3,539 | 12,561 | 12,561 |
| Component 4 Water | | | | |
| Alameda-Zone 7 | 0 | 0 | 0 | 0 |
| AVEK | 0 | 0 | 0 | 0 |
| Castaic Lake | 1,749 | 392 | 1,357 | 1,357 |
| Coachella | 2,225 | 498 | 1,727 | 1,727 |
| Kings | 172 | 39 | 133 | 133 |
| Desert | 919 | 206 | 713 | 713 |
| Dudley Ridge | 0 | 0 | 0 | 0 |
| Empire | 0 | 0 | 0 | 0 |
| Kern | 0 | 0 | 0 | 0 |
| Littlerock | 42 | 9 | 33 | 33 |
| Napa | 80 | 18 | 62 | 62 |
| Oak Flat | 104 | 22 | 82 | 82 |
| Palmdale | 0 | 0 | 0 | 0 |
| San Bernardino | 1,884 | 422 | 1,462 | 1,462 |
| San Geronio | 318 | 71 | 247 | 247 |
| San Luis & Delta-Mendota | 44,450 | 9,601 | 34,849 | 34,849 |
| Santa Clara | 1,838 | 397 | 1,441 | 1,441 |
| Metropolitan | 35,119 | 7,867 | 27,252 | 27,252 |
| Tulare | 0 | 0 | 0 | 0 |
| Totals | 88,900 | 19,542 | 69,358 | 69,358 |

Table 9-5 Lower Yuba River Accord Water Deliveries, 2009 (Acre-feet)**3 of 3**

| Contractor | Purchased | Estimated Carriage and Conveyance Losses^{a,b} | Net Amount | Delivered |
|--------------------------|------------------|---|-------------------|------------------|
| Total | | | | |
| Alameda-Zone 7 | 329 | 71 | 258 | 258 |
| AVEK | 576 | 129 | 447 | 447 |
| Castaic Lake | 2,137 | 479 | 1,658 | 1,658 |
| Coachella | 2,719 | 608 | 2,111 | 2,111 |
| Kings | 210 | 47 | 163 | 163 |
| Desert | 1,123 | 252 | 871 | 871 |
| Dudley Ridge | 234 | 52 | 182 | 182 |
| Empire | 0 | 0 | 0 | 0 |
| Kern | 4,074 | 912 | 3,162 | 3,162 |
| Littlerock | 53 | 11 | 42 | 42 |
| Napa | 175 | 0 | 136 | 136 |
| Oak Flat | 127 | 27 | 100 | 100 |
| Palmdale | 0 | 0 | 0 | 0 |
| San Bernardino | 2,303 | 516 | 1,787 | 1,787 |
| San Geronio | 388 | 87 | 301 | 301 |
| San Luis & Delta-Mendota | 60,000 | 12,960 | 47,040 | 47,040 |
| Santa Clara | 2,246 | 486 | 1,760 | 1,760 |
| Metropolitan | 42,915 | 9,613 | 33,302 | 33,302 |
| Tulare | 391 | 87 | 304 | 304 |
| Totals | 120,000 | 26,337 | 93,663 | 92,615 |

^a A 20 percent carriage cost is usually assumed, and is adjusted in September or October, using water quality modeling to determine the applicable costs over the entire season.

^b An additional 2 percent or 3 percent is usually assumed for Delta Conveyance losses based on the reach to which the water is being delivered.

of Component 3 water, and 88,900 af of Component 4 water.

The 180,000 af total was supplied by 91,100 af from storage releases (surface flows) and 88,900 af from groundwater substitution water. In addition, 1,466 af of 2008 Yuba Accord water was backed into Lake Oroville in late 2009.

In April 2009, two amendments to the Yuba Accord were executed. Amendment Number 1 was executed to address a technical issue related to refill accounting, and Amendment Number 2 was executed to address pricing issues for groundwater substitution water.

Agreements with Non-SWP Agencies

In addition to negotiating agreements with long-term SWP water contractors to provide for specified water deliveries, DWR also enters into agreements with other agencies to provide water conveyance service.

Reclamation—Joint Point of Diversion

DWR conveys CVP water, made available by Reclamation at the Delta, from Banks Pumping Plant to O'Neill Forebay under the Joint Point of Diversion authorized in SWP and CVP water rights. The Joint Point of Diversion allows Reclamation to make up for curtailed water exports from C.W. "Bill" Jones (Jones) Pumping Plant associated with improving conditions for fish in the Delta, or, may allow replacing water exports foregone during maintenance and repair of the Jones Pumping Plant and/or CVP conveyance facilities between the Delta and O'Neill Forebay. The current agreement with Reclamation is effective from March 1, 2008, through February 28, 2010. In 2009, DWR pumped 115,359 af of CVP water under this agreement. (SWPAO #08308)

Reclamation and Byron-Bethany Irrigation District—Musco Family Olive Company

A pending agreement among DWR, Byron-Bethany Irrigation District (Byron-Bethany), and Reclamation provides for the conveyance of up to 800 af of Byron-Bethany's CVP water to repayment Reach 2A of the California Aqueduct for use by Musco Family Olive Company (Musco). DWR delivered a total of 332 af in 2009 under this pending agreement. (SWPAO #04300)

Reclamation and Cross Valley Canal Contractors

Through eight, three-party contracts with Reclamation and CVC contractors, DWR conveys CVP water for CVC water contractors via the California Aqueduct through the CVC turnout at Reach 12E. The following eight CVP water contractors are defined as CVC contractors: County of Fresno (Fresno), County of Tulare (Tulare), Hills Valley Irrigation District (Hills Valley), Kern-Tulare Water District (Kern-Tulare), Lower Tule River Irrigation District (Lower Tule), Pixley Irrigation District (Pixley), Rag Gulch Water District (Rag Gulch), and the Tri-Valley Water District (Tri-Valley). Effective January 1, 2009, Rag Gulch consolidated under Kern-Tulare. DWR approved assignment of Rag Gulch's Interim Renewal Contract to Kern-Tulare on April 7, 2009.

Fresno, Tulare, Lower Tule, and Pixley executed contracts in 1975. Hills Valley, Kern-Tulare, Rag Gulch, and Tri-Valley executed contracts in 1976. All eight original contracts terminated on December 31, 1995. In 1995, amendments were executed that extended the termination date to February 29, 1996, for all contracts. Interim Renewal (IR) contracts have been executed during the ensuing years to extend the termination dates as follows:

- March 1, 1996, through February 28, 1998 (IR 1);
- March 1, 1998, through February 29, 2000 (IR 2);
- March 1, 2000, through November 30, 2000 (IR 3);
- December 1, 2000, through February 28, 2001 (IR 4);
- March 1, 2001, through February 28, 2002 (IR 5);
- March 1, 2002, through February 28, 2003 (IR 6);

- March 1, 2003, through February 29, 2004 (IR 7);
- March 1, 2004, through February 28, 2005 (IR 8);
- March 1, 2005, through February 28, 2006 (IR 9);
- March 1, 2006, through February 28, 2007 (IR 10);
- March 1, 2007, through February 29, 2008 (IR 11); and
- March 1, 2008, through February 28, 2010 (IR 12).

In accordance with the terms of IR 12, DWR delivered a total of 1,280 af during August 2009 to CVC contractors as follows: Fresno, 300 af; Hills Valley, 335 af; Tri-Valley, 114 af; and Tulare, 531 af.

Additionally, during 2009, three CVC Contractors participated in point of delivery agreements for CVP water as described below.

Per Kern-Tulare's request, DWR sent Kern-Tulare a letter with terms and conditions for a change in point of delivery dated July 14, 2009. Kern Tulare accepted on July 20, 2009. Under the terms of the letter agreement, DWR may convey up to 15,000 af of Kern-Tulare's 2009–2010 CVP water from the Delta to O'Neill Forebay at Reach 3 by February 28, 2010, for subsequent delivery by Reclamation to San Luis Water District. DWR conveyed a total of 5,330 af during 2009. (SWPAO #09305)

Per Lower Tule's request, DWR sent Lower Tule a letter with terms and conditions for a change in point of delivery dated August 17, 2009. Lower Tule accepted on October 6, 2009. Under the terms of the letter agreement, DWR may convey up to 3,100 af of Lower Tule's 2009–2010 CVP water from the Delta to O'Neill Forebay at Reach 3 by February 28, 2010, for subsequent delivery by Reclamation to Del Puerto Water District.

DWR conveyed a total of 3,110 af during 2009. (SWPAO #09308)

Per Pixley's request, DWR sent Pixley a letter with terms and conditions for a change in point of delivery dated August 17, 2009. Pixley accepted on August 20, 2009. Under the terms of the letter agreement, DWR may convey up to 3,100 af of Pixley's 2009–2010 CVP water from the Delta to O'Neill Forebay at Reach 3 by February 28, 2010, for subsequent delivery by Reclamation to Del Puerto Water District. DWR conveyed a total of 3,110 af during 2009. (SWPAO #09309)

Reclamation and Kern National Wildlife Refuge—U.S. Fish and Wildlife Service

A letter agreement sent by DWR on September 28, 2004, and accepted by Reclamation on January 24, 2005, provided for DWR to deliver up to 30,500 af of CVP water to the Kern National Wildlife Refuge during the term May 1, 2002, through May 31, 2009. By Amendment Number 2, sent by DWR on June 17, 2008, and accepted by Reclamation on August 1, 2008, the term was extended to May 31, 2012. Under the agreement, DWR would convey CVP water from the end of Reach 7, to Buena Vista Water Storage District's turnouts in Reaches 10A and 12E of the California Aqueduct. DWR conveyed 18,990 af of CVP water to Reach 10A for Kern National Wildlife Refuge during 2009. (SWPAO #03317)

Reclamation and San Joaquin Valley National Cemetery—U.S. Department of Veterans Affairs

A pending letter agreement among the U.S. Department of Veterans Affairs, DWR, and Reclamation provides for the conveyance of up to 850 af of CVP water to Reach 2B of the California Aqueduct to the U.S. Department of Veterans Affairs' San Joaquin Valley National Cemetery. DWR delivered a total of 146 af to the National Cemetery through

Reach 2B of the California Aqueduct in 2009 under this pending agreement. (SWPAO #03312)

Reclamation and San Luis & Delta-Mendota Water Authority

A letter agreement dated August 27, 2009, and executed August 28, 2009, including Amendment Number 1 dated October 22, 2009, and executed October 27, 2009, among Reclamation, DWR, and San Luis & Delta-Mendota Water Authority provided for DWR to convey up to 45,000 af of pre-1914 water rights water from Oakdale Irrigation District and South San Joaquin Irrigation District. During the term of this agreement, July 1, 2009, through December 31, 2009, DWR delivered 15,051 af to Reach 3 of the San Luis Canal portion of the California Aqueduct. (SWPAO #09307)

San Luis Water District

DWR and San Luis Water District executed an agreement on August 3, 2009, providing for DWR conveyance of up to 1,500 af of local groundwater introduced into the California Aqueduct from San Luis Water District's service area. DWR delivered 324 af to Reach 3 turnouts within the San Luis Canal portion of the California Aqueduct. (SWPAO #09061)

Water Deliveries

Table A Deliveries

Each year, by October 1, the SWP water contractors submit initial requests for Table A deliveries allocated to them for use in the subsequent calendar year. Initial Table A allocation amounts for the coming year are made by DWR in December. They are based on operations studies that assume 90 percent exceedence of historical water supply (where exceedence refers to the possibility that water supply in the coming year will be exceeded by the historical water supply), current reservoir

storage, and total requests by the SWP water contractors. Forecasts for the year are updated as hydrologic conditions change. Table A amounts are increased or decreased depending on both actual and projected hydrologic conditions, though decreases are rare as the 90 percent exceedence criterion is fairly conservative.

On October 1, 2008, SWP water contractors submitted initial requests for 2009 totaling 4.17 million acre-feet (maf).

DWR approved 0.63 maf on November 29, 2008, resulting in initial Table A amounts of 15 percent of most SWP water contractor requests. DWR increased the 2009 Table A amounts to 1.67 maf, or 40 percent, on May 20, 2009.

2009 SWP Deliveries

The SWP delivers water for a variety of beneficial uses. In addition to delivering Table A water to SWP water contractors, the SWP:

- conveys water to other public and local agencies through special contracts and agreements;
- provides water for wildlife and recreational uses; and
- stores, releases, and delivers local runoff water from SWP facilities to agencies that hold local water rights.

In 2009, 2,915,435 af was delivered to 29 SWP water contractors and 24 other agencies, categorized as follows:

- 1,053,253 af of Table A water;
- 6,032 af of Article 21 water;
- 179,500 af of 2008 carryover water;
- 139,043 af recovered from water banks;
- 117,553 af of flexible storage withdrawal from Castaic Lake and Lake Perris;
- 9,376 af of settlement water;



Figure 9-1 Water Delivered in 2009 and Delivery Locations of Long-term Water Supply Contractors and Feather River Area Districts with Water Rights Agreements with DWR

- 2,047 af of SWP water for recreation and fish and wildlife;
- 1,408,631 af of non-SWP water delivered to satisfy settlement agreements and agreements with SWP water contractors for local water supplies;
- 166,427 af of 2009 Transfer/Dry Year Purchase Program;
- 1,163,175 af of local water;
- 5,389 af of permit water; and
- 73,640 af delivered to satisfy agreements between the SWP and CVP.

Figure 9-1 shows amounts of water delivered to various locations during 2009.

Specific information about water deliveries made to SWP water contractors and other agencies during 2009, and historical deliveries from 1962 through 2009, are presented in the following three sections, each with a corresponding table located at the end of the chapter:

- Water Delivered to Long-term Water Supply Contractors in 2009, by Service Area (Table 9-6);
- Total Amounts of Water Delivered in 2009, by Month (Table 9-7); and
- Total Amounts of Annual Table A Water and Water Conveyed, by Type, 1962–2009 (Table 9-8).

Please note that the water delivery figures listed are accurate at the time of this Bulletin 132 publication, but small volumes of water may be reclassified over time pursuant to long-term water supply contract provisions. If your research requires more current data than was available at the time of publication, please consult the most recent edition of Bulletin 132 and/or contact DWR staff in the State Water Project Analysis Office.

2009 Water Deliveries to Long-term SWP Water Contractors

Table 9-6 shows amounts delivered in 2009. The following information is arranged by column number.

Table A Water Delivered

Columns 1 through 5 show a detailed breakdown of Table A water delivered for SWP water contractors in 2009.

Turn-Back Pool Water

Column 4 shows 2,000 af of Turn-Back Pool Water delivered to SWP water contractors in 2009.

2008 Carryover Table A Water Delivered During 2009

Column 6 shows a total of 179,500 af was carried over from 2008 for delivery in 2009.

The carryover program was designed to encourage the most effective and beneficial use of water and to avoid obligating the contractors to use or lose the water by December 31 of each year. The SWP water contractors' long-term contracts and amendments state the criteria for carrying over Table A water from one year to the next under Articles 12(e), 14(b), and 56(c).

Total Table A Water Delivered

Column 7 shows all Table A water delivered in 2009—a total of 1,232,753 af.

Article 21

Column 8 shows 6,032 af of 2009 Article 21 water was delivered to SWP water contractors.

Other SWP Water

Column 9 shows 126,929 af of other SWP water. Other SWP water includes flexible withdrawal water from Castaic Lake and Lake Perris, and settlement water.

Total SWP Water Delivered

Column 10 shows 1,365,714 af of total SWP water was delivered in 2009. This includes total Table A water, 2008 Table A carryover water, Article 21 water, and other SWP water consisting of settlement and flexible withdrawal water.

Non-SWP Water Deliveries

Columns 11 and 12 include deliveries of non-SWP water to long-term water contractors. Column 11 shows 139,043 af of water bank recovery water. Column 12 shows 157,000 af of other non-SWP water. Other non-SWP water is local and permit water that an SWP water contractor has a water right to, dry year purchase water, or water purchased from, exchanged with, or transferred from non-SWP agencies. In 2009, non-SWP water deliveries totaled 296,043 af.

Total Deliveries

Column 13 shows total amounts of water delivered to SWP water contractors. In 2009, the SWP delivered 1,661,757 af of water to 29 long-term contractors.

Water Delivered in 2009 by Month

During 2009, the SWP provided water service to 53 agencies, including 29 SWP water contractors. Those agencies and the amounts of water delivered to them by month are listed in Table 9-7 and are summarized below as SWP water and non-SWP water.

SWP Water

SWP water, as defined in the long-term water supply contracts, includes Article 21 water, carryover Table A water, current year Table A amounts, transfer and exchange of Table A water, and Turn-Back Pools A and B. Detailed information concerning those conveyances is found under the "Miscellaneous Agreements with Long-

term SWP Water Contractors" section in this chapter.

Non-SWP Water

In 2009, DWR used SWP facilities to convey non-SWP water for various agencies according to the terms of water rights and water transfer and exchange agreements. Detailed information concerning those conveyances is in this chapter.

Water Rights Water. Water in this category is transported through SWP facilities to long-term SWP water contractors and other agencies according to terms of various settlement agreements. Some water passes through SWP transportation facilities; some is stored in SWP reservoirs for release later. In 2009, 1,177,940 af of water in this category was delivered to the Feather River, Delta, North Bay, South Bay, and Southern California areas, and is summarized below.

Feather River Area. Ten non-SWP agencies received 1,125,147 af:

- Last Chance Creek Water District, 7,332 af;
- Thermalito Irrigation District, 2,036 af;
- South Feather Water and Power Agency, (formerly Oroville-Wyandotte Irrigation District), 5,409 af;
- Western Canal Water District, 334,771 af;
- Joint Water Districts Board, 743,633 af;
- Oswald Water District, 1,623 af;
- Tudor Mutual Water Company, 1,308 af;
- Garden Highway Mutual Water Company, 14,932 af;
- Plumas Mutual Water Company, 13,244 af; and
- Valberde and Ramelli 859 af.

Delta. In the Delta, 22,249 af of Byron-Bethany water was delivered, pursuant to the May 28, 2003, *Agreement Between the Department of Water Resources of the State of California and the Byron-Bethany Irrigation*

District Regarding the Diversion of Water from the Delta.

North Bay Area. In the North Bay area, 5,389 af of Vallejo permit water and 9,376 af of water pursuant to the May 19, 2003, *Settlement Agreement among DWR, Solano County Water Agency, and the Cities of Fairfield, Vacaville, and Benicia* were delivered.

South Bay Area. In the South Bay area, a total of 15,259 af of local water was delivered to Alameda-Zone 7 and Alameda County. These two South Bay Aqueduct (SBA) SWP water contractors hold water rights to runoff from the Lake del Valle watershed.

Southern California. In Southern California, 520 af of local runoff from the Houston Creek watershed was stored and delivered to Crestline under water rights held by DWR on Houston Creek. The authorized place of use is limited to Crestline.

Annual Table A Water and Water Delivered Since 1962

Information about current annual Table A water and water conveyed for the previous 47 years is contained in Table 9-8. The following discussion of conveyed Table A water is arranged according to column numbers.

Annual Table A Water

Columns 1 through 7 of Table 9-8 show the amount of SWP water contractors' annual Table A water by area for years 1962 through 2009 as specified in the Table A schedules of the long-term water supply contracts.

In some instances, Table A schedules—projections of each contractor's need for water to 2035—have been amended to meet the needs of individual contractors. The amounts of annual Table A water each SWP water contractor may request for years 1962

through 2035 can be found in Table B-4 in Appendix B in the back of this Bulletin.

Water Delivered

Columns 8 through 16 show water delivered or conveyed, including initial fill water and operational losses and storage changes.

Table A Water. Column 8 shows amounts of Table A water delivered each year from 1962 through 2009. In 2009, a total of 1,232,753 af of Table A water was delivered.

Article 21 and Unscheduled Water.

Column 9 shows amounts of Article 21 water, as defined under SWP deliveries, and unscheduled water delivered from 1962 through 2009. Article 21 and unscheduled water is water in excess of that required to meet all demands for the year's Table A water and water to be stored in SWP reservoirs. In 2009, a total of 6,032 af of Article 21 water was delivered. No unscheduled water was delivered.

Other Water. Column 10 includes amounts of water classified as other water delivered in 2009, including non-SWP water conveyed through SWP facilities and regulated delivery of local supply. In 2009, a total of 527,207 af of other water was delivered.

Feather River Diversions. Column 11 includes amounts of water from the Feather River delivered according to agreements for water rights water. Column 11 also includes Delta diversions. In 2009, a total of 1,147,396 af in this category was delivered to agencies in the Feather River area, and 22,249 af was delivered to Byron-Bethany in the Delta.

Recreation Water. Column 12 shows water conveyed for recreational use or to provide water to improve water quality for fish and wildlife. In 2009, a total of 2,047 af of SWP water was conveyed for this purpose.

Initial Fill Water. The quantities listed in Column 14 represent the amounts used to initially fill the aqueducts and reservoirs south of the Delta to maximum operating capacities. Initial filling began in 1962, with the filling of the SBA, and was completed in 1979, when Lake Perris reached its maximum operating capacity of 127,000 af. In 1996 and 1997, the Coastal Aqueduct was initially filled.

Operational Losses. Column 15 includes the total amounts of water lost through evaporation and seepage, net storage changes in reservoirs south of the Delta, and amounts of inflow from local drainage areas, including inflows into San Luis Canal and from the Kern River Intertie. Negative values are indicated for years when withdrawals and evaporation from reservoirs south of the Delta exceed the amounts of water added to the reservoirs.

Table 9-6 Water Delivered to Long-term Contractors through 2009, by Service Area (Acre-feet)^a

| SWP Contractor | Table A Water Deliveries | | | | | SWP | | | | Non-SWP | | | Total SWP Water (10) | Total (13) | | | | | | | | | |
|-------------------------------|---|--|----------------------------------|-----------------------------------|------------------------|--------------------------|--------------|---------------------------|------------------|--------------------------------|-----------------------------------|---------------|-------------------------------|---------------|------------------|----------------|------------------|--------------|----------------|------------------|----------------|----------------|------------------|
| | 2009 Table A Not Transferred, or Exchanged, or Stored (1) | 2009 Table A Transferred or Exchanged (2) | 2009 Table A Stored (3) | 2009 Turn-Back Pools (4) | 2009 Table A (5) | 2008 Carryover (6) | Total (7) | 2009 Article 21 (8) | Other SWP (9) | Water Bank Recovery (11) | Other Non-SWP Water (12) | | | | | | | | | | | | |
| Feather River | | | | | | | | | | | | | | | | | | | | | | | |
| County of Butte | 581 | 9,625 | | | 10,206 | | 10,206 | | | | | | 10,206 | | | | | | | | | | |
| Plumas County FC&WCD | 200 | | | | 200 | | 200 | | | | | | 200 | | | | | | | | | | |
| City of Yuba City | 2,114 | | | | 2,114 | | 2,114 | | | | | | 2,114 | | | | | | | | | | |
| North Bay | | | | | | | | | | | | | | | | | | | | | | | |
| Napa County FC&WCD | 2,723 | | | 13 | 2,736 | 4,475 | 7,211 | 1,588 | 9,376 | | | 2,008 | 20,183 | | | | | | | | | | |
| Solano County WA | 7,118 | | | | 7,118 | 3,123 | 10,241 | 4,444 | | | | 5,389 | 20,074 | | | | | | | | | | |
| South Bay | | | | | | | | | | | | | | | | | | | | | | | |
| Alameda County FC&WCD, Zone 7 | 11,745 | | | | 11,745 | 14,584 | 26,329 | | | | | 15,323 | 41,652 | | | | | | | | | | |
| Alameda County WD | 5,911 | | | 8 | 5,919 | 10,494 | 16,413 | | | | 3,083 | 4,694 | 24,190 | | | | | | | | | | |
| Santa Clara Valley WD | 9,188 | | | 54 | 9,242 | 23,867 | 33,109 | | | | 27,775 | 7,801 | 68,685 | | | | | | | | | | |
| San Joaquin Valley | | | | | | | | | | | | | | | | | | | | | | | |
| Castaic Lake WA | | | | | 0 | | 0 | | | | | | 0 | | | | | | | | | | |
| County of Kings | 3,153 | | | 5 | 3,158 | 70 | 3,228 | | | | | 163 | 3,391 | | | | | | | | | | |
| Dudley Ridge WD | 3,985 | 9,200 | | 32 | 13,217 | 7,810 | 21,027 | | | | | 210 | 21,237 | | | | | | | | | | |
| Empire West Side ID | 164 | 870 | | | 1,034 | | 1,034 | | | | | | 1,034 | | | | | | | | | | |
| Kern County WA | 223,964 | 4,667 | | 544 | 229,175 | 56,367 | 285,542 | | | | 17,017 | 5,049 | 307,608 | | | | | | | | | | |
| Oak Flat WD | 1,825 | | | 3 | 1,828 | 66 | 1,894 | | | | | 99 | 1,993 | | | | | | | | | | |
| Tulare Lake Basin WSD | 28,640 | 6,520 | | 52 | 35,212 | 1,271 | 36,483 | | | | | 353 | 36,836 | | | | | | | | | | |
| Central Coast | | | | | | | | | | | | | | | | | | | | | | | |
| San Luis Obispo County FC&WCD | 3,799 | 5,924 | | | 9,723 | | 9,723 | | | | | 2 | 9,725 | | | | | | | | | | |
| Santa Barbara County FC&WCD | 4,961 | | | 25 | 4,986 | 4,523 | 9,509 | | | | | 19 | 9,528 | | | | | | | | | | |
| Southern California | | | | | | | | | | | | | | | | | | | | | | | |
| Antelope Valley-East Kern WA | 13,499 | | | 77 | 13,576 | 18,408 | 31,984 | | | | | 12,766 | 44,750 | | | | | | | | | | |
| Castaic Lake WA | 14,858 | | | 52 | 14,910 | 9,529 | 24,439 | | | | 1,650 | 12,696 | 38,785 | | | | | | | | | | |
| Coachella Valley WD | 40,845 | | | 66 | 40,911 | | 40,911 | | | | | 5,111 | 46,022 | | | | | | | | | | |
| Crestline-Lake Arrowhead WA | | 1,000 | | | 1,000 | 893 | 1,893 | | | | | 521 | 2,414 | | | | | | | | | | |
| Desert WA | 16,865 | | | 27 | 16,892 | | 16,892 | | | | | 1,371 | 18,263 | | | | | | | | | | |
| Littlerock Creek ID | | 920 | | | 920 | | 920 | | | | | 42 | 962 | | | | | | | | | | |
| The Metropolitan WDSC | 544,304 | | | 1,042 | 545,346 | 10,721 | 556,067 | | 117,553 | | 89,518 | 79,840 | 842,978 | | | | | | | | | | |
| Mojave WA | 21,312 | 1,500 | | | 22,812 | 242 | 23,054 | | | | | 5 | 23,059 | | | | | | | | | | |
| Palmdale WD | 2,470 | | | | 2,470 | 3,229 | 5,699 | | | | | 15 | 5,714 | | | | | | | | | | |
| San Bernardino Valley MWD | 25,636 | 449 | | | 26,085 | 9,348 | 35,433 | | | | | 3,213 | 38,646 | | | | | | | | | | |
| San Gabriel Valley MWD | 11,516 | | | | 11,516 | | 11,516 | | | | | 4 | 11,520 | | | | | | | | | | |
| San Geronio Pass WA | 5,312 | | | | 5,312 | 480 | 5,792 | | | | | 305 | 6,097 | | | | | | | | | | |
| Ventura County WPD | 3,890 | | | | 3,890 | | 3,890 | | | | | 1 | 3,891 | | | | | | | | | | |
| Totals | | | | | | | | | | | 1,010,578 | 40,675 | - | 2,000 | 1,053,253 | 179,500 | 1,232,753 | 6,032 | 126,929 | 1,365,714 | 139,043 | 157,000 | 1,661,757 |

^a Please note that the water delivery figures listed are accurate at the time of this Bulletin 132 publication, but small volumes of water may be reclassified over time pursuant to long-term water supply contract provisions. If your research requires more current data than was available at the time of publication, please consult the most recent publication of Bulletin 132 available and/or contact DWR staff in the State Water Project Analysis Office.

Table 9-7 Total Amounts of Water Delivered in 2009, by Month (Acre-feet)

| Contracting Agency and Type of Service | Jan | Feb | Mar | Apr | May | June | July | Aug | Sept | Oct | Nov | Dec | 2009 Total Deliveries |
|---|---------------|------------|------------|---------------|----------------|----------------|----------------|----------------|---------------|---------------|----------------|---------------|-----------------------------|
| FEATHER RIVER AREA | | | | | | | | | | | | | |
| <i>SWP Agencies</i> | | | | | | | | | | | | | |
| City of Yuba City | | | | | | | | | | | | | |
| Table A | 0 | 0 | 0 | 0 | 0 | 12 | 1,034 | 967 | 16 | 0 | 85 | 0 | 2,114 |
| Agency Total | 0 | 0 | 0 | 0 | 0 | 12 | 1,034 | 967 | 16 | 0 | 85 | 0 | 2,114 |
| County of Butte | | | | | | | | | | | | | |
| Table A | 2 | 1 | 2 | 4 | 5 | 13 | 113 | 85 | 97 | 68 | 85 | 106 | 581 |
| Transfer Table A to Palmdale* | 0 | 0 | 0 | 1,251 | 1,592 | 1,431 | 1,803 | 1,892 | 1,186 | 0 | 470 | 0 | 9,625 |
| Recreation/Fish and Wildlife (SWP) | | | | | | | | | | | | | |
| Recreation/Fish and Wildlife | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 4 |
| Agency Total (*excluded from total) | 2 | 1 | 3 | 4 | 5 | 13 | 114 | 85 | 98 | 69 | 85 | 106 | 585 |
| Plumas County Flood Control and Water Conservation District | | | | | | | | | | | | | |
| Table A | 0 | 0 | 0 | 0 | 0 | 48 | 55 | 55 | 42 | 0 | 0 | 0 | 200 |
| Agency Total | 0 | 0 | 0 | 0 | 0 | 48 | 55 | 55 | 42 | 0 | 0 | 0 | 200 |
| <i>Non-SWP Agencies</i> | | | | | | | | | | | | | |
| Garden Highway WC | | | | | | | | | | | | | |
| Regulated delivery of local supply | 0 | 0 | 0 | 1,572 | 3,313 | 2,538 | 3,075 | 1,770 | 1,218 | 1,445 | 1 | 0 | 14,932 |
| Joint Water Districts Board | | | | | | | | | | | | | |
| Regulated delivery of local supply | 24,410 | 0 | 0 | 44,528 | 106,892 | 107,586 | 116,389 | 99,958 | 42,010 | 45,140 | 84,600 | 72,120 | 743,633 |
| Last Chance Creek WD | | | | | | | | | | | | | |
| Regulated delivery of local supply | 0 | 0 | 0 | 32 | 2,634 | 1,262 | 1,573 | 1,581 | 135 | 0 | 113 | 2 | 7,332 |
| Oswald WD | | | | | | | | | | | | | |
| Regulated delivery of local supply | 0 | 0 | 63 | 257 | 271 | 223 | 275 | 217 | 231 | 86 | 0 | 0 | 1,623 |
| Plumas Mutual Water Company | | | | | | | | | | | | | |
| Regulated delivery of local supply | 0 | 0 | 0 | 1,916 | 1,635 | 4,964 | 1,870 | 1,412 | 1,447 | 0 | 0 | 0 | 13,244 |
| South Feather Water & Power Agency | | | | | | | | | | | | | |
| Regulated delivery of local supply | 122 | 38 | 24 | 327 | 644 | 839 | 1,010 | 944 | 893 | 306 | 143 | 119 | 5,409 |
| Thermalito Irrigation District | | | | | | | | | | | | | |
| Regulated delivery of local supply | 96 | 76 | 101 | 150 | 193 | 257 | 294 | 292 | 217 | 153 | 105 | 102 | 2,036 |
| Tudor Mutual Water Company | | | | | | | | | | | | | |
| Regulated delivery of local supply | 37 | 2 | 31 | 284 | 514 | 93 | 0 | 0 | 0 | 0 | 346 | 1 | 1,308 |
| Western Canal Water District | | | | | | | | | | | | | |
| Regulated delivery of local supply | 10,107 | 0 | 0 | 11,824 | 51,301 | 53,971 | 65,428 | 44,463 | 9,715 | 29,554 | 41,128 | 17,280 | 334,771 |
| Valverde and Ramelli | | | | | | | | | | | | | |
| Regulated delivery of local supply | 12 | 11 | 12 | 12 | 12 | 178 | 167 | 270 | 149 | 12 | 12 | 12 | 859 |
| SWP | | | | | | | | | | | | | |
| Regulated delivery of local supply | 2 | 1 | 3 | 4 | 5 | 73 | 1,203 | 1,107 | 156 | 69 | 170 | 106 | 2,899 |
| Non-SWP | | | | | | | | | | | | | |
| Regulated delivery of local supply | 34,784 | 127 | 231 | 60,902 | 167,409 | 171,911 | 190,081 | 150,907 | 56,015 | 76,696 | 126,448 | 89,636 | 1,125,147 |
| Feather River Area Total | 34,786 | 128 | 234 | 60,906 | 167,414 | 171,984 | 191,284 | 152,014 | 56,171 | 76,765 | 126,618 | 89,742 | 1,128,046 |

Table 9-7 Total Amounts of Water Delivered in 2009, by Month (Acre-feet)

| Contracting Agency and Type of Service | Jan | Feb | Mar | Apr | May | June | July | Aug | Sept | Oct | Nov | Dec | 2009 Total Deliveries |
|--|--------------|--------------|----------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-----------------------------|
| NORTH BAY AREA | | | | | | | | | | | | | |
| <i>SWP Agencies</i> | | | | | | | | | | | | | |
| Napa County Flood Control and Water Conservation District | | | | | | | | | | | | | |
| Table A | 0 | 0 | 0 | 0 | 0 | 0 | 142 | 0 | 279 | 806 | 521 | 948 | 2,696 |
| Table A point of delivery through Solano* | 0 | 0 | 0 | 0 | 0 | 1 | 12 | 8 | 5 | 0 | 1 | 0 | 27 |
| Article 56(c) Carryover | 924 | 415 | 0 | 372 | 0 | 0 | 939 | 1,057 | 768 | 0 | 0 | 0 | 4,475 |
| Article 21 | 0 | 220 | 0 | 74 | 1,294 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,588 |
| 2009 Transfer/Dry Year Purchase Program | 0 | 0 | 0 | 0 | 43 | 1,373 | 202 | 249 | 141 | 0 | 0 | 0 | 2,008 |
| Pool A | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 5 |
| Pool B | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 8 |
| Vallejo Permit to Napa | 0 | 0 | 0 | 0 | 0 | 0 | 200 | 200 | 100 | 0 | 0 | 0 | 500 |
| Agency Total (*excluded from total) | 924 | 635 | 0 | 446 | 1,337 | 1,373 | 1,496 | 1,506 | 1,288 | 806 | 521 | 948 | 11,280 |
| Solano County Water Agency | | | | | | | | | | | | | |
| Table A | 0 | 0 | 0 | 43 | 0 | 1,086 | 1,646 | 1,680 | 1,383 | 778 | 243 | 259 | 7,118 |
| Table A point of delivery from Napa | 0 | 0 | 0 | 0 | 0 | 1 | 12 | 8 | 5 | 0 | 1 | 0 | 27 |
| Article 56(c) Carryover | 173 | 202 | 0 | 0 | 0 | 1,340 | 612 | 429 | 0 | 367 | 0 | 0 | 3,123 |
| Table A Exchanged from Mojave | 0 | 0 | 0 | 0 | 0 | 0 | 750 | 750 | 0 | 0 | 0 | 0 | 1,500 |
| Article 21 | 0 | 354 | 0 | 155 | 3,935 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4,444 |
| Settlement | 1,655 | 664 | 0 | 651 | 83 | 1,015 | 0 | 0 | 1,066 | 1,517 | 2,318 | 407 | 9,376 |
| Vallejo Permit | 406 | 68 | 0 | 81 | 43 | 798 | 705 | 705 | 548 | 369 | 1,148 | 18 | 4,889 |
| Vallejo Permit to Napa* | 0 | 0 | 0 | 0 | 0 | 0 | 200 | 200 | 100 | 0 | 0 | 0 | 500 |
| Agency Total (*excluded from total) | 2,234 | 1,288 | 0 | 930 | 4,061 | 4,240 | 3,725 | 3,572 | 3,002 | 3,031 | 3,710 | 684 | 30,477 |
| SWP | 2,752 | 1,855 | 0 | 1,295 | 5,312 | 3,442 | 4,101 | 3,924 | 3,501 | 3,468 | 3,083 | 1,614 | 34,347 |
| Non-SWP | 406 | 68 | 0 | 81 | 86 | 2,171 | 1,120 | 1,154 | 789 | 369 | 1,148 | 18 | 7,410 |
| North Bay Area Total | 3,158 | 1,923 | 0 | 1,376 | 5,398 | 5,613 | 5,221 | 5,078 | 4,290 | 3,837 | 4,231 | 1,632 | 41,757 |
| SOUTH BAY AREA | | | | | | | | | | | | | |
| <i>SWP Agencies</i> | | | | | | | | | | | | | |
| Alameda County Flood Control and Water Conservation District, Zone 7 | | | | | | | | | | | | | |
| Table A | 119 | 12 | 31 | 203 | 583 | 951 | 1,398 | 2,357 | 1,650 | 1,096 | 2,290 | 1,055 | 11,745 |
| Article 56(c) Carryover | 0 | 681 | 604 | 500 | 1,334 | 3,256 | 2,385 | 2,068 | 1,812 | 1,658 | 286 | 0 | 14,584 |
| 2009 Transfer/Dry Year Purchase Program | 0 | 0 | 0 | 0 | 0 | 0 | 110 | 138 | 10 | 0 | 0 | 0 | 258 |
| Local | 1,895 | 752 | 1,474 | 2,297 | 2,329 | 400 | 216 | 268 | 229 | 219 | 220 | 266 | 10,565 |
| Transfer from Byron-Bethany | 0 | 0 | 0 | 0 | 0 | 0 | 1,064 | 1,294 | 1,289 | 853 | 0 | 0 | 4,500 |
| Agency Total | 2,014 | 1,445 | 2,109 | 3,000 | 4,246 | 4,607 | 5,173 | 6,125 | 4,990 | 3,826 | 2,796 | 1,321 | 41,652 |

Table 9-7 Total Amounts of Water Delivered in 2009, by Month (Acre-feet)

| Contracting Agency and Type of Service | Jan | Feb | Mar | Apr | May | June | July | Aug | Sept | Oct | Nov | Dec | 2009 Total Deliveries |
|---|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|--------------|-----------------------------|
| Alameda County Water District | | | | | | | | | | | | | |
| Table A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 79 | 694 | 2,589 | 1,700 | 849 | 5,911 |
| Pool A | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 8 |
| Article 56(c) Carryover | 1,893 | 457 | 0 | 0 | 353 | 1,086 | 2,202 | 2,321 | 953 | 172 | 922 | 135 | 10,494 |
| Semitropic Recovery | 0 | 1,043 | 924 | 1,002 | 114 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3,083 |
| Local | 0 | 0 | 637 | 750 | 1,689 | 1,091 | 0 | 0 | 500 | 0 | 0 | 27 | 4,694 |
| Agency Total | 1,893 | 1,500 | 1,561 | 1,752 | 2,156 | 2,177 | 2,210 | 2,400 | 2,147 | 2,761 | 2,622 | 1,011 | 24,190 |
| Santa Clara Valley Water District | | | | | | | | | | | | | |
| Table A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3,303 | 4,037 | 0 | 1,848 | 9,188 |
| Table A exchange from Kern | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,000 | 0 | 2,000 |
| Pool A | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 20 |
| Pool B | 0 | 0 | 0 | 0 | 0 | 0 | 34 | 0 | 0 | 0 | 0 | 0 | 34 |
| Article 56(c) Carryover | 397 | 1,697 | 1,785 | 4,250 | 6,925 | 8,042 | 771 | 0 | 0 | 0 | 0 | 0 | 23,867 |
| 2009 Transfer/Dry Year Purchase Program | 0 | 0 | 0 | 0 | 0 | 0 | 1,930 | 1,619 | 772 | 0 | 0 | 0 | 4,321 |
| General Conveyance | 0 | 0 | 0 | 0 | 0 | 0 | 500 | 500 | 0 | 0 | 0 | 0 | 1,000 |
| Semitropic Recovery | 0 | 1,954 | 1,733 | 1,346 | 605 | 0 | 5,165 | 6,014 | 3,998 | 3,560 | 2,944 | 456 | 27,775 |
| Transfer from Browns Valley Irrigation District | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,480 | 0 | 0 | 0 | 0 | 2,480 |
| Agency Total | 397 | 3,651 | 3,518 | 5,596 | 7,530 | 8,042 | 8,420 | 10,613 | 8,073 | 7,597 | 4,944 | 2,304 | 70,685 |
| Non-SWP Agencies | | | | | | | | | | | | | |
| Byron-Bethany Irrigation District | | | | | | | | | | | | | |
| Regulated delivery of local supply | 0 | 0 | 569 | 3,319 | 4,428 | 4,221 | 3,502 | 2,750 | 1,939 | 705 | 310 | 506 | 22,249 |
| Recreation/Fish and Wildlife (SWP) | | | | | | | | | | | | | |
| Lake del Valle | 2 | 3 | 6 | 12 | 13 | 16 | 25 | 22 | 23 | 7 | 2 | 2 | 133 |
| SWP | 2,411 | 5,847 | 5,083 | 7,313 | 9,927 | 13,351 | 12,008 | 12,861 | 12,433 | 13,119 | 10,144 | 4,345 | 108,842 |
| Non-SWP | 1,895 | 752 | 2,680 | 6,366 | 8,446 | 5,712 | 7,322 | 9,049 | 4,739 | 1,777 | 530 | 799 | 50,067 |
| South Bay Area Total | 4,306 | 6,599 | 7,763 | 13,679 | 18,373 | 19,063 | 19,330 | 21,910 | 17,172 | 14,896 | 10,674 | 5,144 | 158,909 |
| SAN JOAQUIN VALLEY AREA | | | | | | | | | | | | | |
| SWP Agencies | | | | | | | | | | | | | |
| County of Kings | | | | | | | | | | | | | |
| Table A | 0 | 0 | 0 | 0 | 0 | 0 | 760 | 780 | 0 | 0 | 0 | 0 | 1,540 |
| Table A point of delivery through Westlands* | 1 | 3 | 0 | 0 | 0 | 269 | 376 | 259 | 246 | 188 | 169 | 102 | 1,613 |
| Pool A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| Pool A through Westlands* | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |

Table 9-7 Total Amounts of Water Delivered in 2009, by Month (Acre-feet)

| Contracting Agency and Type of Service | Jan | Feb | Mar | Apr | May | June | July | Aug | Sept | Oct | Nov | Dec | 2009 Total Deliveries |
|---|-----|-----|-----|-------|--------|--------|--------|--------|--------|-------|-------|-----|-----------------------------|
| Pool B | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| Pool B through Westlands | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| Article 56(c) Carryover | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 58 | 0 | 0 | 0 | 0 | 58 |
| Article 56(c) Carryover through Westlands* | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| 2009 Transfer/Dry Year Purchase Program | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 12 |
| 2009 Transfer/Dry Year Purchase Program to Westlands* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 64 | 87 | 0 | 0 | 0 | 151 |
| Agency Total (*excluded from total) | 0 | 0 | 0 | 0 | 0 | 0 | 772 | 840 | 0 | 0 | 0 | 0 | 1,612 |
| Dudley Ridge Water District | | | | | | | | | | | | | |
| Table A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 473 | 3,492 | 0 | 0 | 20 | 3,985 |
| Table A Transfer to Kern* | 0 | 0 | 0 | 0 | 7,500 | 0 | 0 | 0 | 0 | 0 | 300 | 0 | 7,800 |
| Table A Transfer to Westlands* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 800 | 0 | 0 | 0 | 0 | 800 |
| Table A Transfer to Westlands* | 0 | 0 | 0 | 0 | 0 | 600 | 0 | 0 | 0 | 0 | 0 | 0 | 600 |
| Table A Exchange from Kern | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,667 | 0 | 0 | 0 | 0 | 2,667 |
| Pool A | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 12 |
| Pool B | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 20 |
| Article 56(c) Carryover | 210 | 0 | 0 | 0 | 0 | 3,387 | 2,618 | 1,595 | 0 | 0 | 0 | 0 | 7,810 |
| Recovery from Kern Water Bank | 0 | 171 | 581 | 2,131 | 3,948 | 1,900 | 4,610 | 1,291 | 0 | 2,309 | 76 | 0 | 17,017 |
| 2009 Transfer/Dry Year Purchase Program | 0 | 0 | 0 | 0 | 0 | 0 | 70 | 60 | 52 | 0 | 0 | 0 | 182 |
| General Conveyance | 0 | 0 | 0 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 28 |
| Agency Total (*excluded from total) | 210 | 171 | 581 | 2,131 | 3,948 | 5,287 | 7,330 | 6,086 | 3,544 | 2,309 | 76 | 20 | 31,693 |
| Empire West Side Irrigation District | | | | | | | | | | | | | |
| Table A | 0 | 0 | 0 | 164 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 164 |
| Table A Transfer to Westlands* | 0 | 0 | 0 | 0 | 420 | 450 | 0 | 0 | 0 | 0 | 0 | 0 | 870 |
| Agency Total (*excluded from total) | 0 | 0 | 0 | 164 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 164 |
| Kern County Water Agency | | | | | | | | | | | | | |
| Table A | 0 | 0 | 0 | 4,784 | 24,135 | 98,704 | 45,003 | 50,169 | 0 | 0 | 0 | 0 | 222,795 |
| Table A Transfer from Tulare | 0 | 0 | 0 | 0 | 0 | 0 | 2,330 | 0 | 0 | 0 | 0 | 0 | 2,330 |
| Table A Transfer from Dudley Ridge | 0 | 0 | 0 | 0 | 7,500 | 0 | 0 | 0 | 0 | 0 | 300 | 0 | 7,800 |
| Table A Exchange to Dudley Ridge* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,667 | 0 | 0 | 0 | 0 | 2,667 |
| Table A Exchange to Santa Clara* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,000 | 0 | 2,000 |
| 2009 Transfer /Dry Year Purchase Program | 0 | 0 | 0 | 0 | 0 | 0 | 1,681 | 1,640 | 1,353 | 0 | 0 | 0 | 4,674 |
| Table A POD to Western Hills Water District* | 13 | 18 | 67 | 85 | 144 | 144 | 176 | 174 | 173 | 75 | 62 | 38 | 1,169 |
| Pool A | 0 | 0 | 0 | 0 | 0 | 0 | 203 | 0 | 0 | 0 | 0 | 0 | 203 |
| Pool B | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 341 | 0 | 0 | 0 | 341 |
| Article 56(c) Carryover | 0 | 0 | 0 | 0 | 0 | 0 | 18,923 | 13,623 | 23,821 | 0 | 0 | 0 | 56,367 |

Table 9-7 Total Amounts of Water Delivered in 2009, by Month (Acre-feet)

| Contracting Agency and Type of Service | Jan | Feb | Mar | Apr | May | June | July | Aug | Sept | Oct | Nov | Dec | 2009 Total Deliveries |
|--|-----|-----|-------|-------|--------|--------|--------|--------|--------|-------|-------|-------|-----------------------------|
| Kern Water Bank to Dudley Ridge* | 0 | 171 | 581 | 2,131 | 3,948 | 1,900 | 4,610 | 1,291 | 0 | 2,309 | 76 | 0 | 17,017 |
| General Conveyance | 0 | 0 | 0 | 375 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 375 |
| General Conveyance to AVEK* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5,916 | 477 | 0 | 0 | 6,393 |
| General Conveyance to Coachella* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3,000 | 0 | 3,000 |
| General Conveyance to Castaic Lake* | 0 | 0 | 1,100 | 1,100 | 1,100 | 1,100 | 1,100 | 1,100 | 1,100 | 1,100 | 1,100 | 1,100 | 11,000 |
| Agency Total (*excluded from total) | 13 | 18 | 67 | 5,244 | 31,779 | 98,848 | 68,316 | 65,606 | 25,688 | 75 | 362 | 38 | 296,054 |
| Oak Flat Water District | | | | | | | | | | | | | |
| Table A | 0 | 0 | 0 | 123 | 353 | 484 | 351 | 234 | 194 | 22 | 51 | 13 | 1,825 |
| Pool A | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Pool B | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| Article 56(c) Carryover | 6 | 0 | 39 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 |
| 2009 Transfer/Dry Year Purchase Program | 0 | 0 | 0 | 0 | 0 | 0 | 99 | 0 | 0 | 0 | 0 | 0 | 99 |
| Agency Total | 6 | 0 | 39 | 144 | 353 | 484 | 453 | 234 | 194 | 22 | 51 | 13 | 1,993 |
| Tulare Lake Basin Water Storage District | | | | | | | | | | | | | |
| Table A | 0 | 0 | 0 | 857 | 2,260 | 2,339 | 9,821 | 13,186 | 110 | 42 | 25 | 0 | 28,640 |
| Table A Transfer to Kern* | 0 | 0 | 0 | 0 | 0 | 0 | 2,330 | 0 | 0 | 0 | 0 | 0 | 2,330 |
| Table A Transfer to Westlands* | 0 | 0 | 0 | 600 | 2,000 | 990 | 600 | 0 | 0 | 0 | 0 | 0 | 4,190 |
| Pool A | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 0 | 0 | 0 | 0 | 19 |
| Pool B | 0 | 0 | 0 | 0 | 0 | 0 | 33 | 0 | 0 | 0 | 0 | 0 | 33 |
| Article 56(c) Carryover | 64 | 18 | 463 | 92 | 1 | 3 | 0 | 630 | 0 | 0 | 0 | 0 | 1,271 |
| 2009 Transfer /Dry Year Purchase Program | 0 | 0 | 0 | 0 | 0 | 0 | 150 | 144 | 10 | 0 | 0 | 0 | 304 |
| General Conveyance | 0 | 0 | 0 | 49 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 49 |
| Agency Total (*excluded from total) | 64 | 18 | 463 | 998 | 2,261 | 2,342 | 10,023 | 13,960 | 120 | 42 | 25 | 0 | 30,316 |
| Recreation/Fish and Wildlife (SWP) | | | | | | | | | | | | | |
| Department of Fish & Wildlife, Lateral 4 | 0 | 0 | 13 | 48 | 10 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 72 |
| Department of Fish & Wildlife, O'Neill | 62 | 0 | 0 | 0 | 55 | 65 | 76 | 39 | 56 | 67 | 45 | 70 | 535 |
| Parks and Recreation, Cattle | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 |
| Parks and Recreation, San Luis | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 3 |
| Parks and Recreation, O'Neill | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 2 | 1 | 0 | 7 |
| Agency Total | 64 | 1 | 2 | 0 | 56 | 66 | 77 | 40 | 56 | 69 | 46 | 71 | 548 |
| Non-SWP Agencies | | | | | | | | | | | | | |
| CVP Water Annual Contractors | | | | | | | | | | | | | |
| Plain View WD/Musco Family Olive Company | 19 | 21 | 47 | 34 | 37 | 35 | 16 | 5 | 6 | 52 | 39 | 21 | 332 |
| U.S. Dept. of Veterans Affairs, S.J.V. National Cemetery | 6 | 2 | 3 | 17 | 22 | 18 | 22 | 17 | 13 | 12 | 8 | 6 | 146 |
| Agency Total | 25 | 23 | 50 | 51 | 59 | 53 | 38 | 22 | 19 | 64 | 47 | 27 | 478 |

Table 9-7 Total Amounts of Water Delivered in 2009, by Month (Acre-feet)

| Contracting Agency and Type of Service | Jan | Feb | Mar | Apr | May | June | July | Aug | Sept | Oct | Nov | Dec | 2009 Total Deliveries |
|--|--------------|--------------|--------------|--------------|---------------|----------------|----------------|----------------|---------------|---------------|--------------|--------------|-----------------------------|
| Cross Valley Canal Contractors | | | | | | | | | | | | | |
| Tri-Valley | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 114 | 0 | 0 | 0 | 0 | 114 |
| Fresno | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 300 | 0 | 0 | 0 | 0 | 300 |
| Hills Valley | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 335 | 0 | 0 | 0 | 0 | 335 |
| Tulare | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 531 | 0 | 0 | 0 | 0 | 531 |
| Agency Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,280 | 0 | 0 | 0 | 0 | 1,280 |
| U.S. Bureau of Reclamation | | | | | | | | | | | | | |
| Westlands Water District | | | | | | | | | | | | | |
| Table A point of delivery from Kings | 1 | 3 | 0 | 0 | 0 | 269 | 376 | 259 | 246 | 188 | 169 | 102 | 1,613 |
| Pool A from Kings | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Pool B from Kings | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| Article 56(c) Carryover from Kings | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| Table A Transfer from Dudley Ridge | 0 | 0 | 0 | 0 | 0 | 600 | 0 | 0 | 0 | 0 | 0 | 0 | 600 |
| Table A Transfer from Empire | 0 | 0 | 0 | 0 | 420 | 450 | 0 | 800 | 0 | 0 | 0 | 0 | 1,670 |
| Table A Transfer from Tulare | 0 | 0 | 0 | 600 | 2,000 | 990 | 600 | 0 | 0 | 0 | 0 | 0 | 4,190 |
| 2009 Transfer/Dry Year Purchase Program through Kings | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 64 | 87 | 0 | 0 | 0 | 151 |
| Agency Total | 1 | 3 | 0 | 600 | 2,420 | 2,321 | 979 | 1,123 | 333 | 188 | 169 | 102 | 8,239 |
| San Luis & Delta-Medota Water Authority | | | | | | | | | | | | | |
| General Conveyance | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10,890 | 4,161 | 0 | 0 | 15,051 |
| 2009 Transfer/Dry Year Purchase Program | 0 | 0 | 0 | 0 | 0 | 0 | 36,705 | 17,023 | 13,835 | 0 | 0 | 0 | 67,563 |
| Agency Total | 0 | 0 | 0 | 0 | 0 | 0 | 36,705 | 17,023 | 24,725 | 4,161 | 0 | 0 | 82,614 |
| 2009 Transfer/Dry Year Purchase Program to Avenal State Prison | 0 | 0 | 0 | 0 | 0 | 0 | 92 | 97 | 71 | 0 | 0 | 0 | 260 |
| 2009 Transfer/Dry Year Purchase Program to San Joaquin Valley Cemetery | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 10 | 8 | 0 | 0 | 0 | 27 |
| Kern National Wildlife Refuge | 1,125 | 885 | 0 | 0 | 315 | 0 | 0 | 1,002 | 3,600 | 3,995 | 5,272 | 2,796 | 18,990 |
| Recreation | 0 | 2 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 2 | 0 | 9 |
| Fish and Wildlife | 50 | 0 | 11 | 40 | 54 | 53 | 62 | 32 | 48 | 54 | 37 | 136 | 577 |
| Agency Total | 1,176 | 890 | 12 | 640 | 2,790 | 2,375 | 37,848 | 19,288 | 28,785 | 8,398 | 5,480 | 3,034 | 110,716 |
| SWP | 358 | 211 | 1,165 | 8,905 | 40,827 | 109,348 | 85,939 | 85,981 | 28,433 | 2,705 | 729 | 244 | 364,845 |
| Non-SWP | 1,200 | 910 | 62 | 543 | 429 | 107 | 38,919 | 21,375 | 29,973 | 8,274 | 5,358 | 2,959 | 110,109 |
| San Joaquin Valley Area Total | 1,558 | 1,121 | 1,227 | 9,448 | 41,256 | 109,455 | 124,858 | 107,356 | 58,406 | 10,979 | 6,087 | 3,203 | 474,954 |

Table 9-7 Total Amounts of Water Delivered in 2009, by Month (Acre-feet)

Sheet 7 of 11

| Contracting Agency and Type of Service | Jan | Feb | Mar | Apr | May | June | July | Aug | Sept | Oct | Nov | Dec | 2009 Total Deliveries |
|--|--------------|------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|------------|------------|-----------------------------|
| CENTRAL COASTAL AREA | | | | | | | | | | | | | |
| <i>SWP Agencies</i> | | | | | | | | | | | | | |
| San Luis Obispo County Flood Control and Water Conservation District | | | | | | | | | | | | | |
| Table A | 270 | 240 | 261 | 287 | 331 | 355 | 410 | 411 | 337 | 383 | 139 | 375 | 3,799 |
| Transfer Table to Santa Barbara* | 0 | 0 | 0 | 0 | 1,350 | 1,165 | 1,193 | 440 | 699 | 634 | 211 | 232 | 5,924 |
| General Conveyance | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Agency Total (*excluded from total) | 270 | 240 | 261 | 289 | 331 | 355 | 410 | 411 | 337 | 383 | 139 | 375 | 3,801 |
| Santa Barbara County Flood Control and Water Conservation District | | | | | | | | | | | | | |
| Table A | 0 | 0 | 0 | 0 | 0 | 532 | 729 | 1,370 | 1,114 | 672 | 170 | 374 | 4,961 |
| Table Transfer from San Luis Obispo | 0 | 0 | 0 | 0 | 1,350 | 1,165 | 1,193 | 440 | 699 | 634 | 211 | 232 | 5,924 |
| Article 56(c) Carryover | 751 | 673 | 894 | 1,245 | 573 | 387 | 0 | 0 | 0 | 0 | 0 | 0 | 4,523 |
| Pool A | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 9 |
| Pool B | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 0 | 0 | 16 |
| General Conveyance | 0 | 0 | 0 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 |
| Agency Total | 751 | 673 | 894 | 1,264 | 1,923 | 2,084 | 1,947 | 1,810 | 1,813 | 1,306 | 381 | 606 | 15,452 |
| SWP | 1,021 | 913 | 1,155 | 1,532 | 2,254 | 2,439 | 2,357 | 2,221 | 2,150 | 1,689 | 520 | 981 | 19,232 |
| Non-SWP | 0 | 0 | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 |
| Central Coastal Area Total | 1,021 | 913 | 1,155 | 1,553 | 2,254 | 2,439 | 2,357 | 2,221 | 2,150 | 1,689 | 520 | 981 | 19,253 |
| SOUTHERN CALIFORNIA AREA | | | | | | | | | | | | | |
| <i>SWP Agencies</i> | | | | | | | | | | | | | |
| Antelope Valley-East Kern Water Agency | | | | | | | | | | | | | |
| Table A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,719 | 0 | 5,046 | 4,072 | 1,662 | 13,499 |
| Table A point of delivery from Mojave | 20 | 58 | 38 | 107 | 0 | 207 | 166 | 166 | 184 | 97 | 65 | 0 | 1,108 |
| Table A Exchange from Littlerock | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 920 | 920 |
| Article 56(c) Carryover | 0 | 284 | 967 | 2,326 | 4,055 | 0 | 6,271 | 4,505 | 0 | 0 | 0 | 0 | 18,408 |
| 2009 Transfer/Dry Year Purchase Program | 0 | 0 | 0 | 0 | 0 | 0 | 194 | 200 | 53 | 0 | 0 | 0 | 447 |
| General Conveyance | 53 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 53 |
| General Conveyance from storage | 495 | 130 | 0 | 0 | 0 | 4,430 | 547 | 97 | 159 | 15 | 0 | 0 | 5,873 |
| General Conveyance from Kern | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5,916 | 477 | 0 | 0 | 6,393 |
| Pool A | 0 | 0 | 0 | 0 | 0 | 0 | 29 | 0 | 0 | 0 | 0 | 0 | 29 |
| Pool B | 0 | 0 | 0 | 0 | 0 | 0 | 48 | 0 | 0 | 0 | 0 | 0 | 48 |
| Agency Total | 568 | 472 | 1,005 | 2,433 | 4,055 | 4,637 | 7,255 | 7,687 | 6,312 | 5,635 | 4,137 | 2,582 | 46,778 |

Table 9-7 Total Amounts of Water Delivered in 2009, by Month (Acre-feet)

| Contracting Agency and Type of Service | Jan | Feb | Mar | Apr | May | June | July | Aug | Sept | Oct | Nov | Dec | 2009 Total Deliveries |
|---|-------|-----|--------|--------|--------|--------|--------|--------|--------|---------|--------|--------|-----------------------------|
| Castaic Lake Water Agency | | | | | | | | | | | | | |
| Table A | 0 | 0 | 0 | 221 | 0 | 1,027 | 3,380 | 2,790 | 3,590 | 2,525 | 1,292 | 33 | 14,858 |
| Article 56(c) Carryover | 1,750 | 923 | 1,162 | 1,507 | 2,846 | 1,341 | 0 | 0 | 0 | 0 | 0 | 0 | 9,529 |
| 2009 Transfer/Dry Year Purchase Program | 0 | 0 | 0 | 0 | 0 | 0 | 1,106 | 541 | 11 | 0 | 0 | 0 | 1,658 |
| General Conveyance | 38 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 38 |
| General Conveyance from Kern | 0 | 0 | 1,100 | 1,100 | 1,100 | 1,100 | 1,100 | 1,100 | 1,100 | 1,100 | 1,100 | 1,100 | 11,000 |
| Semitropic Recovery | 0 | 0 | 0 | 525 | 25 | 0 | 0 | 0 | 0 | 0 | 544 | 556 | 1,650 |
| Pool A | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 0 | 0 | 0 | 0 | 19 |
| Pool B | 0 | 0 | 0 | 0 | 0 | 0 | 33 | 0 | 0 | 0 | 0 | 0 | 33 |
| Agency Total | 1,788 | 923 | 2,262 | 3,353 | 3,971 | 3,468 | 5,638 | 4,431 | 4,701 | 3,625 | 2,936 | 1,689 | 38,785 |
| Coachella Valley Water District | | | | | | | | | | | | | |
| Table A | 0 | 0 | 0 | 4,541 | 5,928 | 7,594 | 7,594 | 7,594 | 7,594 | 0 | 0 | 0 | 40,845 |
| 2009 Transfer/Dry Year Purchase Program | 0 | 0 | 0 | 0 | 0 | 0 | 799 | 793 | 519 | 0 | 0 | 0 | 2,111 |
| General Conveyance from Kern | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3,000 | 0 | 3,000 |
| Pool A | 0 | 0 | 0 | 0 | 0 | 0 | 25 | 0 | 0 | 0 | 0 | 0 | 25 |
| Pool B | 0 | 0 | 0 | 0 | 0 | 0 | 41 | 0 | 0 | 0 | 0 | 0 | 41 |
| Agency Total | 0 | 0 | 0 | 4,541 | 5,928 | 7,594 | 8,459 | 8,387 | 8,113 | 0 | 3,000 | 0 | 46,022 |
| Crestline-Lake Arrowhead Water Agency | | | | | | | | | | | | | |
| Table A Transfer from San Bernardino | 18 | 28 | 27 | 27 | 0 | 0 | 0 | 0 | 3 | 12 | 27 | 7 | 149 |
| Table A Exchange to San Bernardino* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,000 | 1,000 |
| Article 56(c) extended Carryover | 103 | 0 | 0 | 0 | 0 | 0 | 73 | 193 | 185 | 143 | 89 | 107 | 893 |
| Local | 0 | 60 | 66 | 59 | 114 | 109 | 107 | 0 | 0 | 0 | 0 | 5 | 520 |
| General Conveyance | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Agency Total (*excluded from total) | 122 | 88 | 93 | 86 | 114 | 109 | 180 | 193 | 188 | 155 | 116 | 119 | 1,563 |
| Desert Water Agency | | | | | | | | | | | | | |
| Table A | 0 | 0 | 0 | 1,875 | 2,447 | 3,136 | 3,136 | 3,136 | 3,135 | 0 | 0 | 0 | 16,865 |
| 2009 Transfer/Dry Year Purchase Program | 0 | 0 | 0 | 0 | 0 | 0 | 505 | 516 | 350 | 0 | 0 | 0 | 1,371 |
| Pool A | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 10 |
| Pool B | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 17 |
| Agency Total | 0 | 0 | 0 | 1,875 | 2,447 | 3,136 | 3,668 | 3,652 | 3,485 | 0 | 0 | 0 | 18,263 |
| Little Rock Creek Irrigation District | | | | | | | | | | | | | |
| Table A Exchange to AVEK* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 920 | 920 |
| 2009 Transfer/Dry Year Purchase Program | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 42 | 0 | 0 | 0 | 42 |
| Agency Total (*excluded from total) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 42 | 0 | 0 | 0 | 42 |
| The Metropolitan Water District of Southern California | | | | | | | | | | | | | |
| Table A | 4,340 | 0 | 14,734 | 20,460 | 30,829 | 65,457 | 83,423 | 67,108 | 34,346 | 107,097 | 83,073 | 33,437 | 544,304 |

Table 9-7 Total Amounts of Water Delivered in 2009, by Month (Acre-feet)

Sheet 9 of 11

| Contracting Agency and Type of Service | Jan | Feb | Mar | Apr | May | June | July | Aug | Sept | Oct | Nov | Dec | 2009 Total Deliveries |
|---|--------|--------|--------|--------|--------|--------|---------|---------|--------|---------|--------|--------|-----------------------------|
| Pool A | 0 | 0 | 0 | 0 | 0 | 0 | 388 | 0 | 0 | 0 | 0 | 0 | 388 |
| Pool B | 0 | 0 | 0 | 0 | 0 | 0 | 654 | 0 | 0 | 0 | 0 | 0 | 654 |
| Article 56(c) Carryover | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10,721 | 0 | 0 | 0 | 0 | 10,721 |
| 2009 Transfer/Dry Year Purchase Program | 0 | 0 | 0 | 0 | 0 | 0 | 23,226 | 27,545 | 26,686 | 0 | 0 | 0 | 77,457 |
| General Conveyance | 815 | 0 | 0 | 0 | 0 | 0 | 922 | 601 | 45 | 0 | 0 | 0 | 2,383 |
| Recovery from Arvin-Edison Water Bank | 9,331 | 7,869 | 3,528 | 0 | 0 | 1,771 | 83 | 327 | 8,568 | 0 | 0 | 0 | 31,477 |
| Recovery from Kern-Delta Water Bank | 571 | 800 | 1,326 | 1,619 | 1,847 | 1,900 | 870 | 1,179 | 1,732 | 0 | 0 | 0 | 11,844 |
| Recovery from Semitropic Water Bank | 9,323 | 6,047 | 5,362 | 4,164 | 2,174 | 0 | 0 | 0 | 19,127 | 0 | 0 | 0 | 46,197 |
| Flexible Withdrawal from Castaic Lake | 15,429 | 8,227 | 13,467 | 25,895 | 14,893 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 77,911 |
| Flexible Withdrawal from Lake Perris | 5,814 | 4,164 | 4,136 | 5,419 | 7,772 | 12,337 | 0 | 0 | 0 | 0 | 0 | 0 | 39,642 |
| Agency Total | 45,623 | 27,107 | 42,553 | 57,557 | 57,515 | 81,465 | 109,566 | 107,481 | 90,504 | 107,097 | 83,073 | 33,437 | 842,978 |
| Mojave Water Agency | | | | | | | | | | | | | |
| Table A | 276 | 12 | 722 | 1,471 | 1,240 | 1,915 | 3,447 | 3,982 | 4,421 | 1,207 | 1,047 | 464 | 20,204 |
| Table A point of delivery through AVEK* | 20 | 58 | 38 | 107 | 0 | 207 | 166 | 166 | 184 | 97 | 65 | 0 | 1,108 |
| Article 56(c) extended Carryover | 0 | 0 | 80 | 0 | 162 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 242 |
| Table A Exchanged to Solano* | 0 | 0 | 0 | 0 | 0 | 0 | 750 | 750 | 0 | 0 | 0 | 0 | 1,500 |
| General Conveyance | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| Agency Total (*excluded from total) | 281 | 12 | 802 | 1,471 | 1,402 | 1,915 | 3,447 | 3,982 | 4,421 | 1,207 | 1,047 | 464 | 20,451 |
| Palmdale Water District | | | | | | | | | | | | | |
| Table A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 500 | 1,334 | 489 | 147 | 2,470 |
| Table A Transfer from Butte | 0 | 0 | 0 | 1,251 | 1,592 | 1,431 | 1,803 | 1,892 | 1,186 | 0 | 470 | 0 | 9,625 |
| Article 56(c) Carryover | 992 | 817 | 969 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 451 | 3,229 |
| General Conveyance | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| 2009 Transfer/Dry Year Purchase Program to Littlerock | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 42 | 0 | 0 | 0 | 42 |
| Agency Total | 1,007 | 817 | 969 | 1,251 | 1,592 | 1,431 | 1,803 | 1,892 | 1,686 | 1,334 | 959 | 598 | 15,339 |
| San Bernardino Valley Municipal Water District | | | | | | | | | | | | | |
| Table A | 572 | 0 | 0 | 596 | 778 | 1,930 | 387 | 2,670 | 2,195 | 7,841 | 7,506 | 1,161 | 25,636 |
| Table A Transfer to Crestline* | 18 | 28 | 27 | 27 | 0 | 0 | 0 | 0 | 3 | 12 | 27 | 7 | 149 |
| Table A Exchange from Crestline | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,000 | 1,000 |
| Table A Exchange to San Geronio* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100 | 100 | 100 | 300 |
| 2009 Transfer/Dry Year Purchase Program | 0 | 0 | 0 | 0 | 0 | 0 | 2,161 | 626 | 394 | 0 | 0 | 0 | 3,181 |
| Article 56(c) Carryover | 1,087 | 1,024 | 1,080 | 1,014 | 1,143 | 0 | 0 | 0 | 4,000 | 0 | 0 | 0 | 9,348 |
| General Conveyance | 21 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 32 |
| Agency Total (* excluded from total) | 1,680 | 1,024 | 1,080 | 1,621 | 1,921 | 1,930 | 2,548 | 3,296 | 6,589 | 7,841 | 7,506 | 2,161 | 39,197 |

Table 9-7 Total Amounts of Water Delivered in 2009, by Month (Acre-feet)

| Contracting Agency and Type of Service | Jan | Feb | Mar | Apr | May | June | July | Aug | Sept | Oct | Nov | Dec | 2009 Total Deliveries |
|--|---------------|---------------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|---------------|-----------------------------|
| San Gabriel Valley Municipal Water District | | | | | | | | | | | | | |
| Table A | 0 | 0 | 0 | 0 | 0 | 1,208 | 2,490 | 2,429 | 2,385 | 2,411 | 593 | 0 | 11,516 |
| General Conveyance | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| Agency Total | 0 | 0 | 0 | 0 | 0 | 1,212 | 2,490 | 2,429 | 2,385 | 2,411 | 593 | 0 | 11,520 |
| San Geronio Pass Water Agency | | | | | | | | | | | | | |
| Table A | 0 | 127 | 154 | 374 | 473 | 702 | 460 | 712 | 717 | 558 | 517 | 518 | 5,312 |
| Table A Exchange from San Bernardino | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100 | 100 | 100 | 300 |
| 2009 Transfer/Dry Year Purchase Program | 0 | 0 | 0 | 0 | 0 | 0 | 285 | 14 | 2 | 0 | 0 | 0 | 301 |
| Article 12(e) Carryover | 146 | 167 | 167 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 480 |
| General Conveyance | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| Agency Total | 150 | 294 | 321 | 374 | 473 | 702 | 745 | 726 | 719 | 658 | 617 | 618 | 6,397 |
| Ventura County Watershed Protection District | | | | | | | | | | | | | |
| Table A | 154 | 0 | 0 | 0 | 0 | 0 | 0 | 124 | 154 | 154 | 1,384 | 1,920 | 3,890 |
| General Conveyance | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Agency Total | 155 | 0 | 0 | 0 | 0 | 0 | 0 | 124 | 154 | 154 | 1,384 | 1,920 | 3,891 |
| Recreation/Fish and Wildlife (SWP) | | | | | | | | | | | | | |
| Castaic Lake | 12 | 4 | 2 | 7 | 11 | 24 | 24 | 22 | 22 | 14 | 15 | 7 | 164 |
| Lake Perris | 141 | 141 | 70 | 140 | 140 | 140 | 94 | 49 | 5 | 46 | 34 | 20 | 1,020 |
| Pyramid Lake | 1 | 1 | 2 | 2 | 3 | 3 | 4 | 4 | 3 | 3 | 4 | 1 | 31 |
| Silverwood Lake | 2 | 2 | 3 | 7 | 8 | 10 | 13 | 10 | 9 | 6 | 3 | 2 | 75 |
| Agency Total | 156 | 148 | 77 | 156 | 162 | 177 | 135 | 85 | 39 | 69 | 56 | 30 | 1,290 |
| SWP | 50,082 | 30,695 | 47,996 | 73,548 | 78,366 | 102,133 | 114,982 | 112,332 | 94,061 | 128,594 | 101,324 | 42,513 | 976,626 |
| Non-SWP | 1,448 | 190 | 1,166 | 1,170 | 1,214 | 5,643 | 30,952 | 32,033 | 35,277 | 1,592 | 4,100 | 1,105 | 115,890 |
| Southern California Area Total | 51,530 | 30,885 | 49,162 | 74,718 | 79,580 | 107,776 | 145,934 | 144,365 | 129,338 | 130,186 | 105,424 | 43,618 | 1,092,516 |

Table 9-7 Total Amounts of Water Delivered in 2009, by Month (Acre-feet)

Sheet 11 of 11

| Contracting Agency and Type of Service | Jan | Feb | Mar | Apr | May | June | July | Aug | Sept | Oct | Nov | Dec | 2009 Total Deliveries |
|---|---------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------------------|
| SWP WATER | | | | | | | | | | | | | |
| <i>SWP Long Term Water Supply Contracts</i> | | | | | | | | | | | | | |
| Table A | 5,767 | 471 | 16,009 | 36,195 | 69,506 | 188,114 | 166,509 | 165,717 | 72,356 | 139,026 | 105,579 | 45,329 | 1,010,578 |
| Transfer Table A | 18 | 28 | 27 | 1,878 | 12,862 | 4,636 | 5,926 | 3,132 | 1,888 | 646 | 1,008 | 239 | 32,288 |
| Exchange Table A | 0 | 0 | 0 | 0 | 0 | 0 | 750 | 3,417 | 0 | 100 | 2,100 | 2,020 | 8,387 |
| Pool A | 0 | 0 | 0 | 0 | 0 | 0 | 1,657 | 2 | 341 | 0 | 0 | 0 | 2,000 |
| Article 12(e) Carryover | 146 | 167 | 167 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 480 |
| Article 56(c) Carryover | 8,350 | 7,191 | 8,043 | 11,327 | 17,392 | 18,854 | 34,794 | 37,200 | 31,539 | 2,340 | 1,297 | 693 | 179,020 |
| Article 21 | 0 | 574 | 0 | 229 | 5,229 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6,032 |
| Water Bank Recovery | 19,225 | 17,884 | 13,454 | 10,787 | 8,713 | 5,571 | 10,728 | 8,811 | 33,425 | 5,869 | 3,564 | 1,012 | 139,043 |
| Flexible Storage Withdrawal | 21,243 | 12,391 | 17,603 | 31,314 | 22,665 | 12,337 | 0 | 0 | 0 | 0 | 0 | 0 | 117,553 |
| Agency Total | 54,749 | 38,706 | 55,303 | 91,730 | 136,367 | 229,512 | 220,364 | 218,279 | 139,549 | 147,981 | 113,548 | 49,293 | 1,495,381 |
| <i>Other Water Supply Contracts</i> | | | | | | | | | | | | | |
| Solano Settlement | 1,655 | 664 | 0 | 651 | 83 | 1,015 | 0 | 0 | 1,066 | 1,517 | 2,318 | 407 | 9,376 |
| Recreation/Fish and Wildlife | 222 | 152 | 99 | 216 | 241 | 259 | 239 | 147 | 119 | 146 | 104 | 103 | 2,047 |
| SWP Total | 56,626 | 39,522 | 55,402 | 92,597 | 136,691 | 230,786 | 220,603 | 218,426 | 140,734 | 149,644 | 115,970 | 49,803 | 1,506,804 |
| NON-SWP WATER | | | | | | | | | | | | | |
| <i>Non-SWP Water Supply Contracts</i> | | | | | | | | | | | | | |
| 2009 Transfer/Dry Year Purchase Program | 0 | 0 | 0 | 0 | 43 | 1,373 | 69,336 | 51,279 | 44,396 | 0 | 0 | 0 | 166,427 |
| Local | 36,679 | 939 | 2,977 | 67,327 | 175,969 | 177,732 | 193,906 | 153,925 | 58,683 | 77,620 | 126,978 | 90,440 | 1,163,175 |
| Vallejo Permit | 406 | 68 | 0 | 81 | 43 | 798 | 905 | 905 | 648 | 369 | 1,148 | 18 | 5,389 |
| Subtotal | 37,085 | 1,007 | 2,977 | 67,408 | 176,055 | 179,903 | 264,147 | 206,109 | 103,727 | 77,989 | 128,126 | 90,458 | 1,334,991 |
| CVP/Reclamation | | | | | | | | | | | | | |
| Water transfer to SWP contractor | 0 | 0 | 0 | 0 | 0 | 0 | 1,064 | 3,774 | 1,289 | 853 | 0 | 0 | 6,980 |
| Annual Contract | 25 | 23 | 50 | 51 | 59 | 53 | 38 | 22 | 19 | 64 | 47 | 27 | 478 |
| Conveyance | 1,448 | 130 | 1,100 | 1,584 | 1,100 | 5,534 | 3,069 | 2,298 | 18,110 | 5,753 | 4,100 | 1,100 | 45,326 |
| Cross Valley Canal Contractors | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,280 | 0 | 0 | 0 | 0 | 1,280 |
| Recreation/Fish and Wildlife | 1,175 | 887 | 12 | 40 | 370 | 54 | 63 | 1,035 | 3,648 | 4,049 | 5,311 | 2,932 | 19,576 |
| Subtotal | 2,648 | 1,040 | 1,162 | 1,675 | 1,529 | 5,641 | 4,234 | 8,409 | 23,066 | 10,719 | 9,458 | 4,059 | 73,640 |
| Non-SWP Total | 39,733 | 2,047 | 4,139 | 69,083 | 177,584 | 185,544 | 268,381 | 214,518 | 126,793 | 88,708 | 137,584 | 94,517 | 1,408,631 |
| Grand Total | 96,359 | 41,569 | 59,541 | 161,680 | 314,275 | 416,330 | 488,984 | 432,944 | 267,527 | 238,352 | 253,554 | 144,320 | 2,915,435 |

Table 9-8 Total Amounts of Annual Table A Water and Water Conveyed, by Type, 1962–2009 (Acre-feet)

| Year | Annual Table A Amounts According to Long-term Water Supply Contracts | | | | | | | Water Conveyed | | | | | | | | |
|------|--|--------------------|--------------------|-----------------------------|--------------------------|------------------------------|-----------|-------------------|---|-------------------------------|--|---------------------------------|-------------------------|--|------------|---------------|
| | Upper Feather River Area (1) | North Bay Area (2) | South Bay Area (3) | San Joaquin Valley Area (4) | Central Coastal Area (5) | Southern California Area (6) | Total (7) | Deliveries | | | | | Initial Fill Water (14) | Losses and Storage Changes ^d (15) | Total (16) | |
| | | | | | | | | Table A Water (8) | Article 21, Surplus, and Unscheduled Water ^a (9) | Other Water ^b (10) | Feather River Diversions ^c (11) | Wildlife/ Recreation Water (12) | | | | Subtotal (13) |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18,289 | 0 | 0 | 18,289 | 9 | 272 | 18,570 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22,456 | 0 | 0 | 22,456 | 71 | 185 | 22,712 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 32,507 | 0 | 0 | 32,507 | 171 | 152 | 32,830 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 44,105 | 0 | 0 | 44,105 | 93 | 729 | 44,927 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 67,928 | 0 | 0 | 67,928 | 0 | 1,746 | 69,674 |
| 1967 | 0 | 0 | 11,538 | 0 | 0 | 0 | 11,538 | 11,538 | 0 | 53,605 | 0 | 0 | 65,143 | 8,328 | 4,212 | 77,683 |
| 1968 | 550 | 0 | 109,900 | 77,350 | 0 | 3,700 | 191,500 | 171,709 | 121,534 | 14,777 | 866,926 | 0 | 1,174,946 | 498,926 | 117,906 | 1,791,778 |
| 1969 | 620 | 0 | 98,700 | 163,075 | 0 | 5,000 | 267,395 | 193,020 | 72,397 | 18,829 | 794,374 | 0 | 1,078,620 | 510,614 | 72,196 | 1,661,430 |
| 1970 | 700 | 0 | 114,200 | 202,000 | 0 | 5,700 | 322,600 | 233,993 | 133,024 | 38,080 | 759,759 | 0 | 1,164,856 | 23,947 | 2,435 | 1,191,238 |
| 1971 | 890 | 0 | 116,200 | 251,800 | 0 | 6,700 | 375,590 | 357,340 | 296,019 | 44,119 | 778,362 | 8 | 1,475,848 | 7,853 | 5,812 | 1,489,513 |
| 1972 | 970 | 0 | 118,300 | 413,066 | 0 | 209,423 | 741,759 | 611,801 | 423,964 | 66,638 | 817,398 | 6,489 | 1,926,290 | 100,274 | 53,062 | 2,079,626 |
| 1973 | 1,100 | 0 | 120,400 | 383,652 | 0 | 481,100 | 986,252 | 694,388 | 296,416 | 42,511 | 800,743 | 1,155 | 1,835,213 | 204,638 | 53,798 | 2,093,649 |
| 1974 | 1,230 | 0 | 122,400 | 460,650 | 0 | 597,920 | 1,182,200 | 874,077 | 417,676 | 46,224 | 911,613 | 2,118 | 2,251,708 | 237,554 | 10,657 | 2,499,919 |
| 1975 | 1,610 | 0 | 124,500 | 545,809 | 0 | 714,950 | 1,386,869 | 1,223,990 | 622,902 | 63,793 | 862,218 | 3,377 | 2,776,280 | 103,352 | (94,606) | 2,785,026 |
| 1976 | 1,990 | 0 | 126,500 | 543,417 | 0 | 836,480 | 1,508,387 | 1,373,002 | 580,110 | 115,217 | 946,440 | 1,745 | 3,016,514 | 61,122 | (681,025) | 2,396,611 |
| 1977 | 2,420 | 0 | 128,600 | 581,400 | 0 | 954,901 | 1,667,321 | 574,155 | 0 | 389,065 | 581,994 | 1,111 | 1,546,325 | 0 | (131,151) | 1,415,174 |
| 1978 | 1,850 | 0 | 130,700 | 635,900 | 0 | 1,049,584 | 1,818,034 | 1,452,699 | 16,914 | 121,225 | 786,517 | 1,691 | 2,379,046 | 64,443 | 717,370 | 3,160,859 |
| 1979 | 2,130 | 0 | 132,700 | 702,685 | 0 | 1,190,573 | 2,028,088 | 1,659,896 | 648,389 | 187,630 | 882,549 | 1,766 | 3,380,230 | 12,302 | (83,430) | 3,309,102 |
| 1980 | 1,810 | 500 | 134,800 | 758,100 | 1,946 | 1,317,614 | 2,214,770 | 1,529,749 | 404,557 | 46,459 | 875,045 | 2,131 | 2,857,941 | 0 | (26,606) | 2,831,335 |
| 1981 | 1,940 | 650 | 137,000 | 818,000 | 2,813 | 1,432,065 | 2,392,468 | 1,909,562 | 908,428 | 279,161 | 838,557 | 4,688 | 3,940,396 | 0 | (802,263) | 3,138,133 |
| 1982 | 1,970 | 800 | 139,200 | 876,500 | 5,626 | 1,550,449 | 2,574,545 | 1,750,024 | 215,873 | 154,882 | 776,330 | 4,646 | 2,901,755 | 0 | 480,752 | 3,382,507 |
| 1983 | 2,000 | 950 | 141,400 | 867,118 | 8,439 | 1,681,257 | 2,701,164 | 1,184,869 | 13,019 | 181,453 | 602,905 | 7,849 | 1,990,095 | 0 | (90,997) | 1,899,098 |
| 1984 | 3,630 | 1,100 | 143,600 | 979,211 | 12,698 | 1,744,098 | 2,884,337 | 1,588,619 | 262,917 | 381,024 | 832,332 | 7,040 | 3,071,932 | 0 | (140,182) | 2,931,750 |
| 1985 | 3,760 | 1,250 | 145,800 | 1,019,049 | 21,138 | 1,864,849 | 3,055,846 | 1,995,453 | 307,672 | 404,842 | 870,008 | 4,033 | 3,582,008 | 0 | 92,885 | 3,674,893 |
| 1986 | 4,190 | 1,400 | 148,100 | 1,091,946 | 28,210 | 1,983,890 | 3,257,736 | 1,995,636 | 36,620 | 193,606 | 791,737 | 3,865 | 3,021,464 | 0 | 284,380 | 3,305,844 |
| 1987 | 4,620 | 1,550 | 150,300 | 1,188,500 | 35,204 | 2,103,941 | 3,484,115 | 2,130,086 | 114,907 | 377,592 | 831,947 | 7,672 | 3,462,204 | 0 | (390,413) | 3,071,791 |
| 1988 | 5,060 | 15,471 | 152,500 | 1,246,100 | 43,722 | 2,225,482 | 3,688,335 | 2,385,122 | 0 | 507,076 | 794,834 | 4,889 | 3,691,921 | 0 | (92,850) | 3,599,071 |
| 1989 | 5,500 | 24,615 | 156,700 | 1,290,400 | 56,342 | 2,424,633 | 3,958,190 | 2,853,747 | 0 | 474,559 | 830,500 | 8,135 | 4,166,941 | 0 | 447,917 | 4,614,858 |
| 1990 | 6,040 | 28,190 | 160,900 | 1,313,450 | 70,486 | 2,500,600 | 4,079,666 | 2,582,151 | 90 | 424,697 | 875,099 | 9,262 | 3,891,299 | 0 | (528,869) | 3,362,430 |
| 1991 | 11,880 | 29,590 | 166,400 | 1,338,011 | 70,486 | 2,510,200 | 4,126,567 | 549,113 | 3,521 | 551,051 | 565,395 | 4,879 | 1,673,959 | 0 | 167,435 | 1,841,394 |

Table 9-8 Total Amounts of Annual Table A Water and Water Conveyed, by Type, 1962–2009 (Acre-feet)*(continued)*

| Year | Annual Table A Amounts According to Long-term Water Supply Contracts | | | | | | | Water Conveyed | | | | | | Total (16) | | |
|------------------------------|--|--------------------|-----------------------------|--------------------------|------------------------------|------------|-------------|-------------------|---|-------------------------------|--|---------------------------------|-------------------------|------------|--|---------------|
| | | | | | | | | Deliveries | | | | | Initial Fill Water (14) | | Losses and Storage Changes ^d (15) | |
| | | | | | | | | Table A Water (8) | Article 21, Surplus, and Unscheduled Water ^a (9) | Other Water ^b (10) | Feather River Diversions ^c (11) | Wildlife/ Recreation Water (12) | | | | Subtotal (13) |
| Upper Feather River Area (1) | North Bay Area (2) | South Bay Area (3) | San Joaquin Valley Area (4) | Central Coastal Area (5) | Southern California Area (6) | Total (7) | | | | | | | | | | |
| 1992 | 11,920 | 32,010 | 171,900 | 1,342,300 | 70,486 | 2,510,200 | 4,138,816 | 1,471,454 | 1,156 | 144,789 | 613,978 | 2,605 | 2,233,982 | 0 | (63,541) | 2,170,441 |
| 1993 | 11,960 | 34,620 | 177,400 | 1,342,300 | 70,486 | 2,510,200 | 4,146,966 | 2,315,235 | 0 | 254,854 | 822,589 | 2,609 | 3,395,287 | 0 | 726,123 | 4,121,410 |
| 1994 | 12,000 | 37,215 | 182,000 | 1,342,300 | 70,486 | 2,510,200 | 4,154,201 | 1,749,351 | 112,625 | 236,739 | 874,018 | 8,200 | 2,980,933 | 0 | (295,405) | 2,685,528 |
| 1995 | 12,050 | 44,030 | 184,000 | 1,342,300 | 70,486 | 2,510,200 | 4,163,066 | 1,967,093 | 64,330 | 78,425 | 860,077 | 2,575 | 2,972,500 | 0 | 69,536 | 3,042,036 |
| 1996 | 12,100 | 48,225 | 186,000 | 1,301,630 | 70,486 | 2,492,900 | 4,111,341 | 2,514,825 | 28,647 | 251,391 | 934,997 | 3,907 | 3,733,767 | 86 | 491,550 | 4,225,403 |
| 1997 | 12,150 | 49,315 | 188,000 | 1,297,300 | 45,201 | 2,492,900 | 4,084,866 | 2,325,775 | 21,432 | 322,000 | 993,211 | 4,146 | 3,666,564 | 527 | (11,806) | 3,655,285 |
| 1998 | 12,200 | 50,420 | 188,000 | 1,272,300 | 45,201 | 2,517,900 | 4,086,021 | 1,725,519 | 20,288 | 134,682 | 872,738 | 2,108 | 2,755,335 | 0 | (132,491) | 2,622,844 |
| 1999 | 12,250 | 51,500 | 188,000 | 1,272,300 | 70,486 | 2,519,900 | 4,114,436 | 2,738,891 | 158,070 | 85,312 | 1,108,672 | 4,324 | 4,095,269 | 0 | (189,525) | 3,905,744 |
| 2000 | 14,000 | 55,945 | 210,000 | 1,205,300 | 70,486 | 2,565,900 | 4,121,631 | 3,200,677 | 308,785 | 332,654 | 1,085,886 | 4,030 | 4,932,032 | 0 | (20,103) | 4,911,929 |
| 2001 | 14,670 | 66,561 | 220,000 | 1,185,519 | 70,486 | 2,566,900 | 4,124,136 | 1,690,926 | 43,435 | 477,835 | 1,078,656 | 2,929 | 3,293,781 | 0 | 159,983 | 3,453,764 |
| 2002 | 14,730 | 67,396 | 220,000 | 1,195,219 | 70,486 | 2,557,200 | 4,125,031 | 2,573,030 | 37,165 | 307,162 | 1,132,938 | 3,694 | 4,053,989 | 0 | 80,709 | 4,134,698 |
| 2003 | 14,790 | 68,231 | 220,400 | 1,194,819 | 70,486 | 2,558,200 | 4,126,926 | 2,901,041 | 59,828 | 251,447 | 1,008,093 | 2,846 | 4,223,255 | 0 | 459,377 | 4,682,632 |
| 2004 | 13,100 | 69,056 | 222,619 | 1,182,700 | 70,486 | 2,569,100 | 4,127,061 | 2,599,536 | 218,496 | 385,088 | 1,174,672 | 2,865 | 4,380,657 | 0 | 108,840 | 4,489,497 |
| 2005 | 10,800 | 69,481 | 222,619 | 1,170,000 | 70,486 | 2,582,300 | 4,125,686 | 2,828,406 | 731,083 | 96,932 | 1,074,706 | 1,506 | 4,732,633 | 0 | 529,347 | 5,261,980 |
| 2006 | 11,124 | 69,856 | 222,619 | 1,170,000 | 70,486 | 2,582,800 | 4,126,885 | 2,973,351 | 621,339 | 119,403 | 1,112,551 | 1,936 | 4,828,580 | 0 | (119,981) | 4,708,599 |
| 2007 | 11,520 | 70,231 | 222,619 | 1,170,000 | 70,486 | 2,584,450 | 4,129,306 | 2,081,217 | 309,973 | 449,935 | 1,217,990 | 2,581 | 4,061,696 | 0 | (524,851) | 3,536,845 |
| 2008 | 39,120 | 70,606 | 222,619 | 1,170,000 | 70,486 | 2,593,100 | 4,165,931 | 1,234,240 | 2,729 | 488,818 | 1,109,563 | 2,778 | 2,838,128 | 0 | (758,813) | 2,079,315 |
| 2009 | 39,190 | 70,981 | 222,619 | 1,170,000 | 70,486 | 2,593,100 | 4,166,376 | 1,232,753 | 6,032 | 527,207 | 1,147,396 | 2,047 | 2,915,435 | 0 | (31,319) | 2,886,870 |
| Total | 348,134 | 1,131,745 | 6,902,752 | 40,073,476 | 1,575,288 | 75,212,559 | 125,243,954 | 72,009,059 | 8,642,362 | 10,308,073 | 37,496,313 | 146,235 | 128,602,042 | 1,834,310 | 1,244,122 | 121,865,215 |

^a Values include amounts of deliveries to short-term contractors (Mustang Water District, 1970–1972; Tracy Golf and Country Club, 1974, 1979, and 1980; Green Valley Water District, 1974, 1975, 1978, 1979, 1980, and 1985; and Granite Construction Company, 1980).

^b Includes amounts of SWP and non-SWP water conveyed for SWP and non-SWP water contractors.

^c Includes amounts of water diverted under various water rights agreements.

^d Amounts reflect net effect of (1) operational losses from SWP transportation facilities; (2) changes in reservoir storage south of Delta; (3) storable local inflows to SWP reservoirs; (4) side inflow to San Luis Canal; and (5) inflow into California Aqueduct from Kern River Intertie.



Chapter 10

Power Resources

Castaic Lake and Dam with Castaic Lagoon in the foreground.

Significant Events in 2009

In April 2009, the California Independent System Operator (CAISO) implemented its long-awaited Market Redesign and Technology Upgrade (MRTU). The most significant features of MRTU were Locational Marginal Pricing and an Integrated Forward Market.

Information for this chapter was provided by the State Water Project Analysis Office, the SWP Power and Risk Office, and the Hydropower License Planning and Compliance Office.

Long-term State Water Project (SWP) water contractors depend on the SWP to obtain economical sources of power in order to deliver affordable water. Consequently, the Department of Water Resources (DWR) developed and administers a comprehensive power resources program. Key elements of the program include studies of power resources for future needs, acquisition of long-term power resources and transmission services, short-term purchases or sales of power, and the strategic operation of generation and pumping facilities.

Power Resources Program

The goals of the SWP power resources program are to:

- obtain reliable, environmentally sensitive, and competitively priced power resources and transmission services sufficient to operate the SWP;
- develop and manage power resources to minimize the cost of water deliveries to SWP water contractors;
- meet responsibilities and criteria of the Western Electricity Coordinating Council (WECC); and
- conform to regulations of the Federal Energy Regulatory Commission (FERC).

To achieve these goals, DWR constructed its own power facilities and enters into long-term contracts and short-term arrangements with other electric utilities and with the California Independent System Operator (CAISO) for transmission access and for power purchases and sales. DWR's generators and pumps also provide spinning and nonspinning reserves to CAISO ancillary services markets. In addition, DWR's power resources program takes advantage of SWP water storage and conveyance capacities to control pump loads and generation in a cost-effective manner.

Major Electric Utility Industry Developments

On April 1, 2009, CAISO implemented its Market Redesign and Technology Upgrade (MRTU), a new market structure that fundamentally changed the way SWP supplies energy for its pump load and markets its energy surplus.

The most significant features of MRTU were Locational Marginal Pricing and an Integrated Forward Market (IFM).

Locational Marginal Pricing resulted in generation and load being exposed to congestion costs due to being paid and charged, respectively, at nodal levels rather than zonal levels.

The IFM relieved the SWP of the long-standing requirement to "balance" each hourly pump load with equal supplies of SWP generation or purchased energy. Under IFM, DWR has the flexibility to purchase energy for SWP pumping load from CAISO's IFM; when the energy purchased exceeds SWP pumping energy requirements, DWR can independently sell the excess energy back to CAISO's IFM. These market purchases and sales are executed independently, and the magnitude of the purchases and sales need not be equal. MRTU also eliminates the risks related to DWR having to buy energy in advance of need and then having to sell the energy once the actual size of loads

are known and determined to be less than originally forecast.

As part of a coordinated effort between utilities, developers, State agencies, and federal agencies to meet the State policy goal of 33 percent renewable energy by 2020, the Renewable Energy Transmission Initiative Phase 2 continued in 2009. Phase 2 included conceptual transmission plans for major upgrades to California's transmission system to deliver renewable energy to consumers.

DWR Participation in Electric Utility Industry Activities

DWR continued to participate in CAISO's stakeholder processes to help ensure that the MRTU tariff, CAISO business practice manuals, and MRTU functional simulations are compatible with operations of wholesale market participants including the SWP. DWR's participation in CAISO stakeholder processes focused on the following primary elements:

- Market Initiatives Roadmap;
- dispatchable demand resource;
- proxy demand resource;
- barriers to demand response;
- start-up cost and minimum load cost bidding;
- IFM bid modification;
- real-time imbalance energy offset costs;
- make-whole payments for accepted demand bids;
- payment acceleration;
- convergence bidding;
- participating load refinement;
- standard capacity product—phase I;
- 2010 local capacity procurement;
- interim capacity procurement mechanism tariff language; and
- standard capacity product—phase II.

In addition, DWR participated in the California Energy Commission's

2009 Integrated Energy Policy Report process, which resulted in an SWP resource plan and demand forecast submittal to the California Energy Commission.

Besides CAISO and California Energy Commission stakeholder processes, DWR participated in FERC proceedings to help ensure that various market requirements or cost allocation mechanisms were appropriately structured. This included the following major processes and litigations (with FERC docket number given in parenthesis, if applicable):

- CAISO's Treatment of Participating Load within Demand Response (RE05-5-017, ER06-615-041, ER06-615-037, ER08-1203, EL08-85, AD09-10, ER09-1048);
- CAISO's Exceptional Dispatch (ER09-556, ER06-615-039, ER06-615-047, EL08-88, ER08-1178);
- CAISO's Parameter Tuning under MRTU (ER06-615-023, ER09-240);
- CAISO's Availability of Operating Procedures (ER08-367-005);
- CAISO's Payment Acceleration (ER09-1247);
- CAISO's Regulatory Must Take Generator clarifications (ER09-1542);
- CAISO's Start-Up Cost and Minimum Load Cost allocation (ER09-1529);
- CAISO's Convergence Bidding (ER10-300);
- CAISO's Scarcity Pricing (ER10-500);
- CAISO's amendment to the Participating Transmission Owner's Transmission Control Agreement to permit Pacific Gas & Electric Company (PG&E) to terminate its role as Path 15 Facilitator upon implementation of MRTU (ER09-462);
- Southern California Edison's (SCE) Tariff revisions in compliance with FERC orders on Transmission Balancing Account Adjustments (ER09-167, ER09-187, and ER09-197) and Construction Work in Progress (ER09-446) ratemaking mechanisms;

- SCE's filing to FERC on eligibility for rate incentives with respect to the Eldorado-Ivanpah Transmission Project (EL10-1);
- PG&E's TO12 proposed increase to Transmission Revenue Requirement and transmission service rates (ER09-1521);
- SCE's TO5 proposed increase to Transmission Revenue Requirement and transmission service rates (ER09-1534);
- San Diego Gas & Electric Company's TO3-Cycle 3 filing to increase rates for wholesale and retail customers (ER09-1601);
- Trans Bay Cable LLC's proposal to include the project's Transmission Revenue Requirement in CAISO's Transmission Access Charge (ER10-116);
- PG&E's proposed annual update to its Transmission Revenue Balancing Account (ER10-36); and
- SCE's proposed annual update to its Transmission Revenue Balancing Account (ER10-135) and Reliability Services tariff (ER10-105).

Bulk Electric System Reliability Standards

Background

The Energy Policy Act of 2005 assigned ownership of the Bulk Electrical System reliability to FERC and required the creation of an Electric Reliability Organization. The North American Electric Reliability Council (NERC) was named Electric Reliability Organization by FERC in July 2006 and was tasked with establishing reliability standards for the Bulk Electrical System. Compliance with NERC reliability standards is mandatory.

WECC is the implementation vehicle for promoting regional electric service reliability in both western Canada and the western United States. WECC has oversight for implementation of these standards and validation of compliance, including assessment of penalties and/or sanctions.

The standards developed by NERC fall under these categories:

- BAL—Resource and Demand Balancing;
- COM—Communications;
- CIP—Critical Infrastructure Protection;
- EOP—Emergency Preparedness and Operations;
- FAC—Facilities Design, Connections, and Maintenance;
- INT—Interchange Scheduling and Coordination;
- IRO—Interconnection Reliability Operations and Coordination;
- MOD—Modeling, Data, and Analysis;
- NUC—Nuclear;
- PER—Personnel Performance, Training, and Qualifications;
- PRC—Protection and Control;
- TOP—Transmission Operations;
- TPL—Transmission Planning; and
- VAR—Voltage and Reactive.

NERC Reliability Compliance—Program Goals

DWR is committed to providing an effective reliability compliance program. In addition, DWR strives to achieve a culture of compliance that supports its key business objectives of safety and reliability.

DWR established its compliance program to ensure strict compliance with NERC's mandatory reliability standards. These standards include specific impacts on operations, maintenance, physical security, and cyber security. The compliance program may perform program audits and reviews to ensure successful and ongoing compliance. Audits and reviews are done by the governance side of the compliance program and include only staff that are independent of any responsibility for meeting the reliability standards. Consultants or contractors can be used for providing the objectivity that is required.

Compliance program attributes include:

- senior management involvement and support in fostering a culture of compliance as well as having a continuous role in participating, evaluating, and authorizing the program;
- DWR participation in industry groups that develop, review, approve, and implement reliability standards, North American Energy Standards Board business practice standards, and WECC regional criteria and guidelines;
- identification of employees, designated as Business Owners and Subject Matter Experts, who have responsibility, authority, and accountability for compliance with the reliability standards;
- employee training as required to adhere to the reliability standards and to foster support and awareness of the compliance program and employees' responsibilities;
- encouraging internal communication, along with an easy mechanism to alert program staff to any issues that have caused, or are likely to cause, DWR to be potentially noncompliant with the standards; and
- responsiveness in addressing, correcting, or mitigating issues identified during the development and implementation of the compliance program.

DWR's Compliance Responsibility

All owners, operators, and users of the Bulk Electrical System must formally register with NERC and fully comply with all applicable reliability standards and associated requirements. DWR is currently registered with NERC for 6 of 15 functional areas, as follows:

- Transmission Owner (TO);
- Load Serving Entity (LSE);
- Generation Owner (GO);
- Generation Operator (GOP);
- Purchasing and Selling Entity (PSE); and
- Resource Planner (RP).

DWR organizations that are responsible for the registered functional areas reside within the following offices:

- Plant Asset Management Office;
- State Water Project Operations Control Office;
- Field Division Offices;
- Operations Support Office;
- State Water Project Power and Risk Office; and
- Division of Engineering.

All management and staff in these organizations are required to support DWR's compliance efforts.

DWR has continued the work required to meet the compliance requirements of the reliability standards. In 2009, this involved addressing additional standards and revisions to previous requirements. The second self-certification was completed in January 2009, involving operations, maintenance, and engineering functions. This process requires DWR to certify that it is currently in compliance with the requirements of each standard or provide a violation report supported by a mitigation plan to resolve outstanding items. Violations may lead to financial penalties or reduced operating flexibility.

New standards have been developed for cyber security concerns. DWR has added staff and consultants to focus on the additional requirements of these standards. There are a significant number of technical and administrative requirements to be addressed as a result of the Critical Infrastructure Protection standards.

Hydropower License Planning and Compliance

Compliance with FERC license terms and conditions is an on-going SWP effort. The record of compliance is significant and is considered seriously by FERC. FERC has the

authority to require strict compliance with the terms and conditions and levy fines for noncompliance. In addition to setting license requirements and periodic submittals, DWR is subject to FERC safety and environmental inspections and is required to comply with the findings in the inspection reports.

The SWP Deputy Director appointed a Chief of Hydropower License Planning and Compliance in the Executive Division in May 2009. The appointment was made to streamline, consolidate, and improve DWR's efforts to meet and prepare for existing and new hydropower license challenges. The Deputy Director delegated authority to the Chief to be DWR's designated FERC contact and also charged the Chief with establishing a new office to coordinate and manage the various hydropower license activities dispersed among SWP divisions.

Oroville Facilities Relicensing

On January 26, 2005, DWR filed an application with FERC requesting a new license for the Oroville Facilities P-2100. The existing 50-year term hydropower license expired January 31, 2007, and, until a new license is issued, FERC is issuing annual licenses.

FERC issued the final environmental impact statement (EIS) on May 18, 2007. DWR certified the final environmental impact report (EIR) on July 22, 2008, and filed it with the State Water Resources Control Board (SWRCB) the same day. One month later, Butte and Plumas counties filed a lawsuit challenging the adequacy of the final EIR.

During 2009, primary achievements included the following:

- SWRCB provided a draft water quality certification, and DWR reviewed the draft and submitted comments.
- DWR withdrew and resubmitted the application for Section 401 water quality certification with the SWRCB, thereby

reinitiating the 1-year clock for SWRCB to take action.

- Formal consultation continued with the National Marine Fisheries Service (NOAA Fisheries) on anadromous fish listed under the Endangered Species Act. On July 6, 2007, DWR submitted to NOAA Fisheries the combined biological assessment and essential fish habitat assessment evaluating the effects of Oroville Facilities relicensing on federally listed species including Sacramento River winter-run Chinook salmon, Central Valley spring-run salmon, Central Valley steelhead, and the southern distinct population segment of North American green sturgeon and their designated critical habitats protected under the Endangered Species Act. NOAA Fisheries submitted a draft biological opinion to FERC in July 2009, and DWR provided comments to FERC in August. The draft biological opinion stated that Oroville Facilities relicensing, as proposed, would not be likely to jeopardize the federally listed anadromous fish species. DWR noted a few inconsistencies between the biological opinion and settlement agreement and identified a few factual corrections.
- DWR and PG&E submitted the draft Habitat Expansion Plan for Central Valley salmon and steelhead to signatories and stakeholders of the Habitat Expansion Agreement in November 2009. The Habitat Expansion Plan proposed actions in the Lower Yuba River or Battle Creek, Big Chico Creek, and Antelope Creek (Three-Creeks) to meet the Habitat Expansion Agreement goal of providing spawning habitat sufficient to accommodate an estimated net increase of 2,000 to 3,000 spring-run Chinook salmon in the Sacramento River Basin;
- DWR lodged the administrative record with Yolo County Superior Court pursuant to California Environmental Quality Act litigation with Butte and Plumas counties; and

- settlement conferences were held with Butte and Plumas counties related to the final EIR challenge and payment to DWR for preparation of the administrative record.

The following is a partial list of SWP facilities that will be subject to the new license terms and conditions:

- Oroville Dam and Lake Oroville;
- Hyatt Pumping-Generating Plant;
- Thermalito Pumping-Generating Plant;
- Thermalito Diversion Dam Powerplant;
- Thermalito Diversion Dam;
- Feather River Fish Barrier Dam;
- Feather River Fish Hatchery;
- Thermalito Power Canal;
- Thermalito Forebay; and
- Thermalito Afterbay.

FERC License P2426

DWR operates power generating facilities on the West Branch and East Branch of the California Aqueduct. This power generation is authorized by FERC license P2426.

FERC issued an order amending Article 52 and Exhibit S of FERC Project No. 2426. The order was issued in response to DWR's 2005 application for an amendment to revise the minimum stream flow requirements and fish stocking practices in Piru Creek below Pyramid Dam. The stream flow revisions were requested to reduce impacts to the listed arroyo toad and other special-status species, such as the California red-legged frog. FERC's order also acknowledged the Department of Fish and Wildlife and NOAA Fisheries deliberations on future fish stocking practices in Piru Creek and provided 120 days for DWR to file a plan and schedule for providing catchable rainbow trout.

Existing SWP Power Facilities

Figure 10-1 shows the names, locations, and nameplate capacities of DWR's primary power facilities.

Hydroelectric

Economic hydroelectric generation provides the largest share of SWP power resources. The combined Hyatt Pumping-Generating Plant and Thermalito Pumping-Generating Plant (Hyatt-Thermalito) generate about 2.2 billion kilowatt hours (kWh) of energy in a median water year, while the 3 megawatts (MW) from the Thermalito Diversion Dam Powerplant adds another 24 million kWh per year.

Generation at California Aqueduct recovery plants—Alamo, Devil Canyon, Gianelli, Mojave Siphon, and Warne—varies with the amount of water conveyed. These five plants generate about one-sixth of the total energy used by the SWP.

Coal

Since July 1983, under the *Participation Agreement Reid Gardner Unit No. 4* between DWR and Nevada Power Company (which in 2008 began doing business under the name NV Energy (NVE)), DWR has received energy from Reid Gardner Powerplant, a coal-fired facility in Nevada. Reid Gardner Powerplant consists of four units. DWR owns 67.8 percent of Unit 4, and NVE owns the remainder of Unit 4, as well as all of Units 1, 2, and 3. Under this agreement, DWR receives up to 235 MW from Unit 4, subject to NVE's limited right to interrupt DWR's energy deliveries. Whenever NVE interrupts DWR's scheduled energy, DWR receives payment based on NVE's combustion turbine costs.

The Reid Gardner agreement expires in July 2013 and will not be renewed.



Figure 10-1 Names, Locations, and Nameplate Capacities of Primary Power Facilities

DWR Power Planning Activities

To meet future SWP power requirements, DWR initiated development of an Integrated Resource Plan (IRP09) that reached draft stage in late 2009. Using a 20-year planning horizon, IRP09 focuses on projecting long-term energy needs, establishing the means by which the value and risk of prospective energy assets may be compared, and planning for the acquisition of energy supplies with durations in intermediate (1 month to 4 years) and long-term (5 years and longer) time frames. IRP09 doesn't address strategies for short-term (1 year or less) energy trades, but it does recognize the relationship between short-term and long-term needs and identifies the need for providing management reports to better characterize the short-term transactions as a basis for future assessments. Factors considered include:

- anticipated power requirements for SWP pumping;
- anticipated power generation from SWP resources;
- transmission access and costs;
- anticipated water deliveries to contractors;
- costs of power resources;
- CAISO Ancillary Services and other costs;
- cost escalation rates; and
- operating characteristics of units.

As part of DWR's response to the Governor's Climate Change Initiative (Executive Order S-03-05) and Green Building Initiative (Executive Order S-20-04), the Global Warming Solutions Act (Assembly Bill 32), and State agency recycling and waste diversion (Assembly Bill 75) requirements, in April 2009, DWR established a sustainability policy with the intended purpose of minimizing the department's impact on the environment and reducing its greenhouse gas emissions. The policy included maximizing the use of technically feasible and cost-effective clean and renewable

energy sources for the SWP and DWR's business operations. To achieve this, a renewable energy procurement plan reached draft stage in late 2009, which would also be included as part of IRP09.

Additionally, DWR continues to consider several potential enlargements of existing power plants, including a second unit at Alamo Powerplant and a third unit at Warne Powerplant.

Contractual Resource Arrangements

Through joint development, exchanges, and purchases, DWR obtains a significant amount of capacity and energy for SWP operations from other utilities and energy marketers of the WSPP (formerly the Western Systems Power Pool until its official name change in 2007) throughout California, the Northwest, and the Southwest. Under these agreements, DWR can sell, buy, or exchange energy on an hourly to multiyear basis, as needed.

Joint Developments

In 1966, DWR entered into a contract with the Los Angeles Department of Water and Power (LADWP) for joint development of the West Branch of the California Aqueduct. LADWP constructed and operates Castaic Powerplant, which is connected to the LADWP transmission system at the Sylmar Substation. DWR receives capacity and energy at the Sylmar Substation based on weekly water schedules through the West Branch.

Gianelli Pumping-Generating Plant is a joint project between DWR and the Bureau of Reclamation (Reclamation). DWR's share of the facility is 222 MW, and Reclamation's share is 202 MW.

Purchases

DWR obtains a significant amount of energy through long-term and short-term purchase agreements.

Long-term Purchase Agreements. The output of the 165 MW hydroelectric Pine Flat Powerplant, owned and operated by Kings River Conservation District, supplies the SWP with about 400 million kWh of energy in median water years. DWR also contracts for the energy output of five hydroelectric plants totaling 30 MW owned and operated by The Metropolitan Water District of Southern California (Metropolitan).

In 2008, Metropolitan notified DWR that it will recall the energy output from the 5.1 MW Yorba Linda Powerplant, one of the five contracted hydroelectric plants. The recall will become effective in 2018. In 2009, Metropolitan notified DWR that it will recall the energy output from the remaining four hydroelectric plants, with the recall becoming effective in 2019.

In March 2008, DWR entered into the Second Phase Agreement with Northern California Power Agency and various public agencies for funding the planning and development activities of the Lodi Energy Center, which would be a new combined cycle combustion turbine generation facility that uses natural gas as its source of fuel. DWR would have the right to purchase a portion of the capacity and energy from this facility.

In 2009, DWR began initial negotiations with Northern California Power Agency and the public agencies on the Lodi Energy Center Power Sales Agreement, which would financially commit each participant to pay for its share of the facility in exchange for a pro rata share of its capacity and energy. As contemplated in the initial negotiations, DWR's share would be 60 MW. The facility is planned to be operational in 2012.

Short-term Purchase Agreements. DWR also purchases energy from member utilities and energy marketers of the WSPP. In addition to standard WSPP transactions, DWR can purchase surplus energy from Metropolitan's Colorado River Aqueduct system according

to the terms of the 1988 Coordination Agreement between DWR and Metropolitan. This agreement also provides for monthly surplus firm and economy energy sales from DWR to Metropolitan and energy exchanges between DWR and Metropolitan.

Energy Exchanges

Under an energy exchange agreement with Sacramento Municipal Utility District (SMUD), DWR provides SMUD with energy during peak periods from June through August. In return, SMUD provides DWR with energy during off-peak periods from January through March and from October through December.

Load Management

DWR operates its pumps through an extensive computerized network. This control system, coupled with the operating flexibility of DWR's pumping and generating plants provided by storage reservoirs, allows DWR to maximize pumping during off-peak periods when power costs are lower—usually at night—and maximize power generation during on-peak periods when power costs are higher. By taking advantage of this scheduling flexibility, whenever not restricted by operating requirements, SWP pump load and generation are optimized to reduce the net cost of power needed for SWP water deliveries.

Sales or Exchanges of Excess Power

When generation from SWP power resources exceeds requirements, DWR sells or exchanges the excess power through contracts with CAISO, utilities, and marketers.

Demand Response

DWR is the largest single supplier of demand response in the CAISO market via a Participating Load Agreement under which DWR bids SWP load to be curtailed by the CAISO when the price of energy in the CAISO market reaches DWR's bid price. In addition,

through a contract with PG&E, DWR provides a Remedial Action System under which certain SWP pumping and generating plants will be instantaneously curtailed in a contingency event.

Contractual Transmission Agreements

Although able to develop or construct transmission independently, DWR depends on other sources for transmission services. PG&E, CAISO, and SCE are the primary providers of transmission service between SWP power resources and pumping loads and with interconnected utilities for power purchases, sales, and exchanges.

Under the Comprehensive Agreement with PG&E, DWR receives 1,300 MW of firm network transmission service over the PG&E transmission system to serve SWP pump loads and power resources in Northern and Central California. Upon implementation of CAISO's MRTU on April 1, 2009, transmission service to DWR under the Comprehensive Agreement is limited to point-to-point service. In addition, DWR needs to obtain service to CAISO trading hubs using CAISO's wheeling transmission service.

In Southern California, DWR receives transmission service for SWP loads and resources through CAISO. Additionally, DWR has interconnection and wholesale distribution service agreements with SCE for service over SCE's distribution facilities from the CAISO interchange points to SWP loads and resources.

Under the participation agreement with NVE, DWR receives 235 MW of firm transmission service over NVE's transmission system between Reid Gardner Unit 4 and the El Dorado Substation. Under the Firm Transmission Service Agreement between SCE and DWR, DWR receives 235 MW of firm transmission service over SCE's transmission system between El Dorado Substation and Vincent Substation.

SWP Power Operations in 2009

Tables 10-1 through 10-4 present historical information about SWP power operations for calendar year 2009, including energy consumed, generated, exchanged, purchased, and sold.

Energy Consumed

In 2009, energy used at the 28 SWP pumping and generating plants totaled 6.09 million megawatt hours (MWh). According to the terms and conditions of various water conveyance contracts and exchange agreements, some water belonging to the Central Valley Project is pumped through Banks and Dos Amigos pumping plants and Gianelli Pumping-Generating Plant. Reclamation furnishes additional energy for this purpose.

Table 10-1 shows the amount of energy used each month at SWP pumping and power generating plants to operate the SWP in 2009, excluding transmission losses.

Energy Generated

Table 10-2 shows the amounts of energy generated at SWP facilities in 2009, as well as energy purchased for SWP operations.

Hydroelectric and Coal

The Hyatt-Thermalito power complex in Oroville generated 1.50 million MWh of energy in 2009.

Energy generated at SWP aqueduct recovery plants—Gianelli, Alamo, Devil Canyon, Mojave Siphon, and Warne—totaled 0.975 million MWh.

The SWP share of energy generated at the coal-fired Reid Gardner Unit 4 in Nevada totaled 1.22 million MWh.

Table 10-1 Energy Used at Pumping Plants and Power Plants in 2009, by Month (Millions of Kilowatt-Hours)

| Pumping Plants and Power Plants | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Total |
|---|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|------------------|
| Hyatt-Thermalito Pumping-Generating Plant (station service) | 0.075 | 0.167 | 1.104 | 0.101 | 0.024 | 0.009 | 0.000 | 0.000 | 0.001 | 0.000 | 0.001 | 0.004 | 1.488 |
| North Bay Interim Pumping Plant | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Cordelia Pumping Plant | 0.785 | 0.494 | 0.057 | 0.465 | 1.312 | 1.217 | 1.271 | 1.358 | 1.211 | 0.905 | 0.779 | 0.511 | 10.365 |
| Barker Slough Pumping Plant | 0.577 | 0.347 | 0.026 | 0.247 | 1.571 | 1.127 | 1.037 | 0.987 | 0.819 | 0.720 | 0.800 | 0.285 | 8.543 |
| South Bay Pumping Plant | 2.906 | 5.078 | 5.073 | 8.289 | 11.760 | 12.261 | 11.449 | 14.699 | 12.113 | 11.665 | 5.590 | 0.066 | 100.947 |
| Del Valle Pumping Plant | 0.030 | 0.027 | 0.029 | 0.040 | 0.081 | 0.049 | 0.111 | 0.013 | 0.013 | 0.015 | 0.023 | 0.129 | 0.559 |
| Banks Pumping Plant | 42.446 | 31.763 | 49.161 | 22.622 | 17.597 | 9.369 | 100.422 | 49.416 | 34.536 | 34.650 | 25.902 | 59.102 | 476.985 |
| Gianelli Pumping-Generating Plant (SWP share) | 31.903 | 24.384 | 35.756 | 6.673 | 0.192 | 0.014 | 9.485 | 4.419 | 1.010 | 6.844 | 11.203 | 42.146 | 174.028 |
| Dos Amigos Pumping Plant (SWP share) | 1.581 | 1.749 | 5.845 | 9.348 | 19.508 | 24.111 | 39.750 | 32.978 | 24.525 | 19.895 | 6.881 | 5.809 | 191.980 |
| Buena Vista Pumping Plant | 9.690 | 9.805 | 15.639 | 15.691 | 26.443 | 32.389 | 39.962 | 36.579 | 29.366 | 35.102 | 29.977 | 16.779 | 297.423 |
| Teerink Pumping Plant | 13.406 | 13.076 | 17.394 | 15.103 | 26.151 | 32.470 | 39.615 | 37.143 | 32.263 | 39.918 | 35.271 | 20.149 | 321.958 |
| Chrisman Pumping Plant | 29.768 | 28.961 | 38.014 | 32.188 | 55.483 | 68.813 | 85.000 | 80.924 | 71.085 | 88.792 | 78.975 | 45.383 | 703.386 |
| Edmonston Pumping Plant | 110.130 | 106.501 | 139.182 | 115.595 | 201.211 | 249.887 | 308.538 | 294.563 | 260.203 | 327.850 | 294.417 | 169.479 | 2,577.557 |
| Alamo Powerplant (station service) | 0.052 | 0.058 | 0.052 | 0.028 | 0.027 | 0.005 | 0.001 | 0.007 | 0.003 | 0.008 | 0.015 | 0.049 | 0.306 |
| Pearblossom Pumping Plant | 4.955 | 1.814 | 8.606 | 12.130 | 14.812 | 35.182 | 46.621 | 46.813 | 41.663 | 57.332 | 42.902 | 7.846 | 320.676 |
| Pine Flat Powerplant (station service) | 0.231 | 0.119 | 0.107 | 0.000 | 0.000 | 0.000 | 0.000 | 0.005 | 0.211 | 0.225 | 0.226 | 0.265 | 1.389 |
| Mojave Siphon Powerplant (station service) | 0.077 | 0.076 | 0.074 | 0.047 | 0.047 | 0.022 | 0.014 | 0.010 | 0.005 | 0.003 | 0.022 | 0.070 | 0.468 |
| Devil Canyon Powerplant (station service) | 0.197 | 0.208 | 0.139 | 0.140 | 0.102 | 0.022 | 0.000 | 0.006 | 0.000 | 0.002 | 0.001 | 0.102 | 0.919 |
| Oso Pumping Plant | 10.957 | 11.787 | 12.706 | 7.819 | 16.056 | 13.762 | 15.138 | 12.995 | 11.237 | 13.426 | 15.694 | 16.184 | 157.762 |
| Warne Powerplant (station service) | 0.290 | 0.172 | 0.162 | 0.150 | 0.002 | 0.001 | 0.000 | 0.000 | 0.068 | 0.030 | 0.000 | 0.004 | 0.880 |
| Las Perillas Pumping Plant | 0.114 | 0.219 | 0.320 | 0.652 | 1.091 | 1.352 | 1.592 | 1.314 | 0.878 | 0.633 | 0.073 | 0.112 | 8.349 |
| Badger Hill Pumping Plant | 0.254 | 0.544 | 0.795 | 1.645 | 2.745 | 3.353 | 3.809 | 3.224 | 2.199 | 1.635 | 0.166 | 0.259 | 20.628 |
| Devil's Den Pumping Plant | 0.736 | 0.656 | 0.816 | 1.081 | 1.573 | 1.686 | 1.661 | 1.557 | 1.522 | 1.252 | 0.419 | 0.729 | 13.689 |
| Bluestone Pumping Plant | 0.684 | 0.608 | 0.757 | 0.998 | 1.465 | 1.568 | 1.543 | 1.444 | 1.412 | 1.149 | 0.390 | 0.677 | 12.695 |
| Polonio Pass Pumping Plant | 0.751 | 0.676 | 0.834 | 1.091 | 1.587 | 1.705 | 1.680 | 1.554 | 1.515 | 1.233 | 0.405 | 0.726 | 13.758 |
| Greenspot Pumping Plant | 0.374 | 0.502 | 0.628 | 0.777 | 0.878 | 1.022 | 1.309 | 1.334 | 1.732 | 1.635 | 1.557 | 1.326 | 13.075 |
| Crafton Hills Pumping Plant | 0.441 | 0.660 | 0.757 | 0.839 | 0.994 | 1.194 | 1.350 | 1.475 | 1.765 | 1.771 | 1.501 | 1.000 | 13.747 |
| Cherry Valley Pumping Plant | 0.015 | 0.014 | 0.017 | 0.012 | 0.026 | 0.038 | 0.044 | 0.044 | 0.056 | 0.034 | 0.031 | 0.033 | 0.363 |
| Subtotal | 263.425 | 240.464 | 334.054 | 253.772 | 402.737 | 492.628 | 711.401 | 624.861 | 531.413 | 646.725 | 553.223 | 389.223 | 5,443.974 |
| Deviation Adjustments | (1.655) | (0.416) | 2.118 | 163.299 | 93.310 | 94.331 | 33.579 | (46.575) | 34.414 | 105.916 | 99.783 | 67.127 | 645.232 |
| Total Energy Required for SWP | 261.770 | 240.048 | 336.171 | 417.071 | 496.047 | 586.959 | 744.981 | 578.286 | 565.826 | 752.641 | 653.006 | 456.350 | 6,089.156 |

Table 10-2 Energy Generated and Purchased in 2009, by Month (Millions of Kilowatt-Hours)

| Sources of Energy | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Total |
|---|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|------------------|
| SWP Energy Sources | | | | | | | | | | | | | |
| Hyatt-Thermalito Powerplant | 38.595 | 18.381 | 12.176 | 143.239 | 153.241 | 201.494 | 348.917 | 155.959 | 73.744 | 90.013 | 120.601 | 93.608 | 1,449.966 |
| Gianelli Pumping-Generating Plant (SWP share) | 0.000 | 0.217 | 0.480 | 4.794 | 17.211 | 22.613 | 1.613 | 2.210 | 3.219 | 3.478 | 0.000 | 0.000 | 55.835 |
| Alamo Powerplant | 0.757 | 0.216 | 1.418 | 2.375 | 3.116 | 6.712 | 8.674 | 8.507 | 7.658 | 8.042 | 6.496 | 1.385 | 55.356 |
| Mojave Siphon Powerplant | 0.309 | 0.025 | 0.662 | 1.028 | 1.387 | 3.576 | 4.952 | 2.729 | 4.056 | 6.365 | 4.791 | 0.639 | 30.518 |
| Devil Canyon Powerplant | 7.154 | 3.171 | 14.893 | 18.212 | 24.526 | 59.138 | 80.789 | 79.408 | 71.972 | 102.884 | 76.685 | 14.874 | 553.706 |
| Reid Gardner Unit 4 | 134.264 | 97.555 | 122.566 | 78.756 | 99.433 | 84.739 | 83.824 | 83.235 | 94.805 | 97.899 | 115.044 | 132.330 | 1,224.450 |
| Warne Powerplant | 22.610 | 25.626 | 27.033 | 17.825 | 28.517 | 27.935 | 28.973 | 28.974 | 17.607 | 15.241 | 19.655 | 19.905 | 279.900 |
| <i>Subtotal</i> | <i>203.689</i> | <i>145.191</i> | <i>179.228</i> | <i>266.229</i> | <i>327.431</i> | <i>406.206</i> | <i>557.741</i> | <i>361.023</i> | <i>273.061</i> | <i>323.922</i> | <i>343.271</i> | <i>262.740</i> | <i>3,649.731</i> |
| Energy Sources from Long-term Agreements | | | | | | | | | | | | | |
| Castaic Powerplant | 38.926 | 42.690 | 43.228 | 40.646 | 70.781 | 51.770 | 55.692 | 44.925 | 42.857 | 52.861 | 59.460 | 61.896 | 605.731 |
| Metropolitan Small Hydro Generation | 7.494 | 5.528 | 7.308 | 9.223 | 9.984 | 10.240 | 9.649 | 10.033 | 8.530 | 9.517 | 7.964 | 6.114 | 101.584 |
| Pine Flat Powerplant (Kings River Conservation Dist.) | 0.000 | 0.000 | 4.469 | 18.123 | 27.507 | 99.062 | 92.488 | 28.139 | 0.000 | 0.000 | 0.000 | 0.000 | 269.788 |
| Power Exchange Delivered to Other Entities | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | (27.000) | (27.900) | (27.900) | 0.000 | 0.000 | 0.000 | 0.000 | (82.800) |
| Power Exchange Received from Other Entities | 27.342 | 24.696 | 27.216 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 27.342 | 26.586 | 0.000 | 133.182 |
| Power Exchange Delivered to SCE | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Power Exchange Received from SCE | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Energy to Metropolitan for CRA ^a Pumping | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Energy from Metropolitan for CRA ^a | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Power System Imbalances | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Purchases | | | | | | | | | | | | | |
| Purchases (Firm and Power Contractors) | 146.695 | 131.533 | 157.789 | 158.800 | 154.800 | 258.400 | 287.000 | 303.200 | 358.800 | 419.400 | 311.725 | 254.200 | 2,942.342 |
| <i>Subtotal</i> | <i>220.457</i> | <i>204.447</i> | <i>240.010</i> | <i>226.792</i> | <i>263.072</i> | <i>392.472</i> | <i>416.929</i> | <i>358.396</i> | <i>410.187</i> | <i>509.120</i> | <i>405.734</i> | <i>322.210</i> | <i>3,969.826</i> |
| Total Resources | 424.146 | 349.638 | 419.238 | 493.021 | 590.502 | 798.679 | 974.671 | 719.419 | 683.247 | 833.041 | 749.006 | 584.950 | 7,619.558 |
| Less Energy Sales | (162.376) | (109.590) | (83.067) | (75.950) | (94.455) | (211.720) | (229.690) | (141.133) | (117.421) | (80.400) | (96.000) | (128.600) | (1,530.402) |
| Total Energy Provided to the SWP | 261.770 | 240.048 | 336.171 | 417.071 | 496.047 | 586.959 | 744.981 | 578.286 | 565.826 | 752.641 | 653.006 | 456.350 | 6,089.156 |

^a Contractual Resource Arrangement.

Contractual Resource Arrangements

SWP power operations rely on contractual arrangements as well as SWP facilities. These contractual arrangements include joint development projects, energy exchanges, and energy purchases.

Joint Developments

Through the *West Branch Cooperative Development Agreement* with LADWP, DWR receives energy based on the amount of water scheduled through the West Branch. In 2009, LADWP provided 605,731 MWh for DWR's share of energy generated at Castaic Powerplant.

DWR's share of Gianelli Pumping-Generating Plant used 174,028 MWh and generated 55,835 MWh of energy.

Energy Exchanges

As detailed previously in this chapter, DWR exchanged energy with SMUD in 2009 under the terms of an existing energy exchange agreement.

Purchases and Costs

Table 10-3 shows amounts of energy, transmission, and other services purchased in 2009, and the costs of purchases. Amounts include contractual short-term and long-term purchases. They also include transactions of energy, transmission, capacity, and ancillary services with CAISO.

DWR purchased 3.22 million MWh of energy at a cost of \$96 million. Other SWP-related costs, including transmission, operation, maintenance, and CAISO charges totaled \$114.66 million. This amount includes \$4.94 million for debt service and \$3.97 million for operations and maintenance, both associated with Pine Flat Powerplant. It also includes \$2.09 million for transmission at Reid Gardner Unit 4 and

\$57.55 million for operations, maintenance, fuel, insurance, and property taxes at Reid Gardner Unit 4.

Long-term Purchase Agreements. According to terms of the Kings River Conservation District contract, DWR receives the total output of the 165 MW Pine Flat Powerplant. In 2009, the power plant provided 269,788 MWh of energy to the SWP at an energy component cost of \$2.07 million.

Under the Metropolitan Small Hydro contract, DWR purchased 101,582 MWh of energy in 2009 from five small hydroelectric power plants on the Metropolitan system at a cost of \$5.78 million.

Short-term Purchase Agreements. Existing resources and long-term power and transmission contracts ensure that the SWP has enough power to meet long-term needs. When SWP power requirements exceed resources during daily operations, short-term purchases make up the difference. In 2009, the SWP purchased short-term energy from 21 WSPP marketers, in addition to 6 public electric utilities trading under the WSPP agreement.

Contractual Sales of Excess Power

In 2009, DWR sold 1.53 million MWh of energy to 7 utilities and 19 WSPP power marketers for a total revenue of \$62.27 million. DWR also received \$55.33 million in revenues for capacity and other energy-related services, including \$53.52 million for transactions made through CAISO. See Table 10-4 for information about energy and other services sold and revenue received, including those sold to CAISO.

Table 10-3 Energy, Transmission, and Related Costs in 2009

| Category | Contractual Energy Purchased (MWh) | Energy Cost (Dollars) | Transmission Cost Outside CAISO (Dollars) | Other Energy Related Costs (Dollars) | Total Cost (Dollars) |
|----------------------------------|------------------------------------|-----------------------|---|--------------------------------------|----------------------|
| CAISO | | | | 46,024,364 ^a | 46,024,364 |
| Long-term Contracts ^b | 371,370 | 7,851,566 | 5,939,392 | 68,637,726 | 82,428,684 |
| Energy Marketers (WSPP) | 2,849,938 | 88,141,433 | | | 88,141,433 |
| Miscellaneous Fees | | | | | |
| Total | 3,221,308 | 95,992,999 | 5,939,392 | 114,662,090 | 216,594,481 |

^a Includes all costs under CAISO.^b Kings River Conservation District, The Metropolitan Water District of Southern California, NV Energy, Southern California Edison, and Pacific Gas & Electric Company.**Table 10-4 Energy Sold in 2009 and Revenues from Sales per Contract Agreements**

| Category | Contractual Energy Sold (MWh) | Revenue from Energy Sales (Dollars) | Other Energy-Related Revenue (Dollars) | Total Sales (Dollars) |
|-------------------------|-------------------------------|-------------------------------------|--|-----------------------|
| CAISO | | | 53,515,052 ^a | 53,515,052 |
| Long-term Contracts | 54,059 | 2,782,310 | 1,813,536 | 4,595,846 |
| Energy Marketers (WSPP) | 1,477,143 | 59,489,269 | | 59,489,269 |
| Total | 1,531,202 | 62,271,579 | 55,328,588 | 117,600,167 |

^a Includes all costs under CAISO.

Forecasting Power Operations

Each year, after reviewing the water contractors' water delivery requests and the construction schedule for future facilities, DWR forecasts the associated energy consumption and generation through 2035. Short-term power requirements, based on actual water supply and reservoir storage levels, are determined for the current and two ensuing years of operation. Long-term operational studies for the remaining years are based on median-year water supply conditions and optimal reservoir storage levels. The forecast also includes losses in reservoirs and aqueducts, recreation water, and water to replace storage in reservoirs south of the Delta.

Actual SWP power requirements may vary significantly from the forecast amounts. Those variations are due to the amount of water available and delivered in a given year. For example, dry conditions in Northern California could result in a reduction in the amount of water available for delivery and for generation. If full deliveries could not be made, less power would be used. Power requirements could also decrease during a wet year because of the availability of local water in the San Joaquin Valley or Southern California.

Conversely, power requirements could exceed the amount originally forecast if actual water deliveries are greater than the amounts estimated. For example, if additional pumping is needed to refill reservoirs south of the Delta after an unexpectedly dry year, more power would be used.



Chapter 11

Facilities Maintenance

Edmonston Pumping Plant is the highest-lift pumping plant in the State Water Project.

Significant Events in 2009

Comprehensive Facility Reviews (CFRs) were completed in February 2009 for Los Banos Dam and Little Panoche Dam. Additionally, CFRs were completed in March 2009 for Sisk Dam and O'Neill Dam.

Oroville Dam radial gates 3, 4, and 5 side seals were replaced, continuing the process to replace all 8 radial gate side seals.

The Thermalito Afterbay River Outlet radial gates were inspected by a team of inspectors from the Division of Operations and Maintenance (O&M) Corrosion Engineering, Dam Safety Branch, and O&M Oroville Field Division, Engineering Branch.

In September 2009, The Metropolitan Water District of Southern California (Metropolitan) connected the Inland Feeder Project pipeline to Devil Canyon Second Afterbay. The culmination of this multiyear Metropolitan project consisted of constructing a 44-mile conveyance system that connected the State Water Project (SWP) to Diamond Valley Lake.

Information for this chapter was provided by the Division of Operations and Maintenance, the Division of Safety of Dams, the Division of Integrated Regional Water Management, and the State Water Project Analysis Office.

The Department of Water Resources (DWR), through the Division of Operations and Maintenance (O&M), monitors all State Water Project (SWP) facilities to ensure safety and reliability. DWR is required, by federal and State law, to contract periodically with independent consultants to review the safety of SWP dams and power facilities.

Inspecting and Maintaining Project Dams

DWR conducts several types of inspections of SWP facilities to ensure that each dam is safe for continued operation. O&M staff collect and evaluate data regarding the performance of each facility. The Division of Safety of Dams (DSOD) has several programs to ensure the safety of dams that are a part of the SWP. DSOD engineers inspect SWP dams annually to ensure they remain safe, are performing as intended, and are not developing problems. These annual inspections also include in-depth instrumentation review of dam surveillance data. Engineers from DSOD also evaluate proposed modifications to existing dams, as well as designs for any proposed new jurisdictional dams. DSOD also oversees construction activities to ensure work is performed in accordance with the approved plans and specifications. The Federal Energy Regulatory Commission (FERC) inspects all licensed SWP facilities annually. These inspections include a review of significant events, instrumentation data, and the visual appearance of each dam, penstock, or power plant. In addition, under FERC and California Water Code (CWC) requirements, consulting engineers and geologists are retained to evaluate SWP dam facilities every 5 years.

DWR contracts periodically with independent consultants to review the safety of SWP dams and power facilities, except for Pearblossom Spill Basin. Pearblossom Spill Basin Dam was originally designed to be used during misoperation at the Pearblossom

Pumping Plant; the spill basin was never fully completed and has never been used.

Routine Inspections

During 2009, DSOD, along with O&M staff, inspected Frenchman, Antelope, and Grizzly Valley dams in the Upper Feather River area; Oroville, Bidwell Bar Saddle Dam, Parish Camp Saddle Dam, Thermalito Diversion, Fish Barrier, Thermalito Forebay, and Thermalito Afterbay dams in the Oroville Field Division; Clifton Court Forebay, Bethany, Patterson, and Del Valle dams in the Delta Field Division; Cedar Springs, Devil Canyon Powerplant Second Afterbay, Perris, and Crafton Hills dams in the Southern Field Division. Pyramid and Castaic dams in the Southern Field Division were inspected in January of 2010 as a part of the fiscal year reporting cycle. Also in 2009, FERC performed its routine inspections of the Oroville facilities under Project No. 2100 and Southern Field Division facilities under Project No. 2426.

Joint-Use Facility Inspection

The four dams in the San Luis Field Division (Sisk, O'Neil, Los Banos Detention, and Little Panoche Detention) are used jointly with the Bureau of Reclamation (Reclamation) and are not under DSOD jurisdiction. Every 6 years, Reclamation conducts a Comprehensive Facility Review (CFR) of the four joint-use facility dams in the San Luis Field Division. The CFR's for Los Banos and Little Panoche occurred in February 2009. The CFR's for Sisk and O'Neill Forebay Dam occurred in March 2009. Periodic Facility Reviews (PFRs) are also conducted by Reclamation every 6 years

using an alternate schedule spaced between the CFR schedule. PFR's will be conducted for the joint-use facilities in 2012.

Independent Reviews

California Water Code Reviews

To comply with the CWC and the California Code of Regulations (CCR), DWR is required to retain a consulting board to review: (1) the adequacy of the design of any dam or reservoir DWR proposes to construct and (2) the safety of the completed construction, including the terms and conditions for the Certificate of Approval.

These provisions require DWR to retain a board of three consultants to meet at least once every 5 years to review the operational performance of DWR-owned dams and more frequently when consulting on new dams. The board of consultants independently reviews and assesses safety conditions of SWP dams.

Consultants are selected based on their knowledge of geotechnical, structural, and civil engineering, including their experience in evaluating dam performance. Their independent assessments include the review of dam performance during earthquakes, evaluation of instrumentation data, inspection of each dam, and evaluation of studies performed by DWR. The consultants then prepare reports on each dam, approving dams as safe for continued operation and making recommendations. Based on these recommendations, DWR prepares action plans.

In 2009, the FERC Part 12D safety inspection for the Oroville Facilities dams fulfilled the same function as a Director's Safety Review Board. The Safety Review Board found Oroville, Thermalito Diversion, Thermalito Forebay, Thermalito Afterbay, and Fish Barrier dams safe for continued operation.

FERC Reviews

These reviews and the FERC Part 12D safety inspections, which may be conducted by one or more consultants, are scheduled every 5 years. The eighth Part 12D safety inspections for Oroville, Thermalito Diversion, Thermalito Forebay, Thermalito Afterbay, and Fish Barrier dams were conducted in August 2009. As a supplement to the FERC Part 12D safety inspection, FERC's Dam Safety Performance Monitoring Program requires that a Potential Failure Mode Analysis (PFMA) be performed for FERC-licensed dams. The PFMA involves document review and site visits to develop a comprehensive list of potential failure modes at each dam. From this review process, three documents are generated: the FERC Part 12D safety inspection report; the PFMA report; and the Supporting Technical Information Document, which summarizes the project elements and details that do not change significantly over time.

Arroyo Pasajero Program

The Arroyo Pasajero and its tributaries drain approximately 530 square miles of the Diablo Range of the coastal mountains west of the California Aqueduct in Fresno County. Its downstream juncture with the San Luis Canal segment of the California Aqueduct, between Highway 198 and Avenal Cutoff Road, poses a particularly difficult operational and maintenance problem for the SWP. Reclamation designed and constructed the San Luis Canal segment of the California Aqueduct, while DWR operates and maintains it, with all costs shared 45 percent and 55 percent, respectively.

During periods of heavy rainfall, high flows in the Arroyo Pasajero and its tributaries transport heavy sediment loads eroded from the Arroyo Pasajero watershed. Over a vast amount of time, sediment transported by arroyo floods formed a 450-square-mile alluvial fan extending from its apex at the

eastern margin of Pleasant Valley (Anticline Ridge) to the San Joaquin Valley trough. The California Aqueduct traverses the arroyo's alluvial fan and forms a barrier to arroyo flood flows. Flood control facilities, designed to accommodate Arroyo Pasajero floodwater, include the West Side Detention Basin (designed to store floodwater and sediment west of the California Aqueduct), an evacuation culvert to release floodwater east of the California Aqueduct, and drain inlets to release floodwater into the California Aqueduct.

Since the floods of 1969, when nearly all of the detention basin's planned 50-year sediment storage capacity was filled by deposition, DWR and Reclamation have worked to mitigate the effects of heavy flooding and the diminished storage capacity of the detention basin. In 1980, asbestos discovered in The Metropolitan Water District of Southern California's (Metropolitan) water supply was traced to runoff from the Arroyo Pasajero and other Diablo Range streams. This discovery, in conjunction with the high cost of removing sediment from the California Aqueduct, led DWR to adjust operating procedures to minimize runoff entering the California Aqueduct. The volume of runoff and sediment transported by the Arroyo Pasajero is roughly 400 percent greater than was originally estimated during the detention basin design in the mid-1960s.

DWR and DWR/Reclamation Alternative Long-term Solution

Construction to restore the storage capacity of the West Side Detention Basin started in August 2004, and many of the designed improvements were completed by the summer of 2005. These improvements restored the storage capacity to the detention basin and added control over releases of floodwater into the California Aqueduct and onto private farmland. The intended 50-year level of protection is achieved by raising

levees, adding a control structure equipped with a rubber dam, installing flood gates, and acquiring flood easements.

One project component yet to be implemented is to armor the railroad embankment to reduce damages when it's overtopped by floodwater. In 2008, DWR signed an agreement with the railroad, whereby DWR would fund the improvements and the railroad would agree to design, build, and maintain the improvements. In late 2008, the railroad obtained cost estimates that were more than 50 percent higher than anticipated. In 2009, DWR continued to work with the railroad to refine the estimates and revise the agreement. That agreement expired December 30, 2009, before any progress toward armoring the railroad was made.

In 2009, DWR also signed the certificate of acceptance for the deeds for the easements and lands acquired via litigation. The deeds were recorded, and the process to transfer the rights to Reclamation, as required by the joint-use agreement, was initiated.

Related Activities

Planning for a restoration project similar to the West Side Detention Basin restoration project began in 2006 for the Cantua Creek Stream Group detention basins. The project goal is to improve aqueduct flood protection and water quality.

A draft reconnaissance study for the Cantua Creek Stream Group Improvement Project identified actions such as raising embankments, making modifications to structures, and acquiring flood easements to provide a 50-year level of protection for the California Aqueduct at the Cantua Creek Stream Group. Improving water quality in the aqueduct was a significant goal of the study, since currently, several of the existing drain inlets are not gated, and sediment-laden floodwater flows directly into the

aqueduct with little detention and decanting. It is widely understood that increasing flood storage and detention of this floodwater prior to releasing it into the aqueduct would provide a significant benefit to water quality in the aqueduct. As of 2009, DWR continued to work on the study, refining the proposed measures that will be moved to feasibility-level analyses.

Repairs, Modifications, and Inspections

DWR continually monitors all SWP facilities and performs repairs, modifications, and inspections as necessary to ensure safe, reliable water delivery.

In 2009, sealing and paving of roads was undertaken in the San Luis, San Joaquin, and Southern field divisions. This included work along the California Aqueduct as well as repaving parking areas at Pearblossom Pumping Plant and Alamo Powerplant; repaving from 300th Street to Oso Pumping Plant and Pyramid Dam access road; crack sealing of the parking areas at Buena Vista, Teerink, and Chrisman pumping plants; and fog sealing the Edmonston Pumping Plant access road.

In 2009, Condition Assessment Program (CAP) inspections were performed on more than 20 different reaches of the SWP for more than 150 miles of canals. To aid in maintenance efforts, check structures, culverts, drain inlets, gauging stations, overchutes, turn-ins, turnouts, and utility crossings along the canal were inspected and rated.

In the Southern Field Division, features along 140 miles of the West and East branches were inspected.

The Coastal Aqueduct in the San Joaquin Field Division was also inspected from Avenal Gap to Devil's Den Pumping Plant, a

length of 15 miles. In addition, 20 miles of the Santa Ana and Peace Valley pipelines underwent topside inspections only. Every manhole was checked, but pipe was not drained. Inspections of 95 of the 328 bridges on the SWP were also completed.

Inspections are scheduled annually, biannually, or every five years. A majority of the inspected areas have only been inspected once since the implementation of SWP Civil CAP in 2006. Future inspections aim to identify trends in maintenance and aging of the SWP.

Outages for Maintenance and Repair of Facilities

Table 11-1 presents information, arranged chronologically, about significant scheduled and unscheduled outages at SWP pumping and power plants in 2009. The table includes information about incidents resulting in outages exceeding 14 days.

Related Activities

Encroachment Permit

DWR partnered with the City of Palmdale to resurrect an encroachment permit that was part of a defunct subdivision (Anaverde), which is adjacent to DWR's right of way and affects SWP cross drainage. The City of Palmdale utilized bonds that were obtained by the developer during the construction of Anaverde, and used a portion of those bond funds to continue improvements within DWR's right of way. After 8 years and numerous meetings, revisions, and review, DWR's right of way was improved to correct the cross drainage problem.

Data Handbook

Revisions were completed and an updated edition of the Data Handbook was published in 2009.

Table 11-1 Outages for Maintenance and Repair of Facilities in 2009, by Month

1 of 4

| Month | Facility | Units Taken Out of Service |
|----------|-------------------------------------|---|
| January | Hyatt Powerplant | Unit 4 from January 14 to March 17 for turbine repairs |
| | Hyatt Powerplant | Unit 6 from January 16 to March 3 to repair turbine wicket gate |
| | Thermalito Pumping-Generating Plant | Unit 1 from January 19 to February 4 for condition assessment inspection |
| | Dos Amigos Pumping Plant | Unit 3 from January 12 to March 18 for condition assessment inspection |
| | Edmonston Pumping Plant | Unit 2 from January 12 to expected completion date in 2010 to replace pump |
| | Teerink Pumping Plant | Unit 8 from January 15 to October 17 to investigate discharge valve |
| | Devil Canyon Powerplant | Unit 1 from January 26 to February 21 for condition assessment inspection |
| | Mojave Siphon Powerplant | Unit 1 from January 12 to February 17 for annual maintenance |
| | Pearblossom Pumping Plant | Unit 4 from January 12 to March 27 to repair motor rotor |
| | Pine Flat Powerplant | Units 1 through 3 from January 15 to 30 for gas breaker maintenance |
| February | Barker Slough Pumping Plant | Unit 1 from February 2 to March 16 to replace defective relay |
| | Banks Pumping Plant | Unit 2 from February 23 to March 19 for condition assessment inspection |
| | Banks Pumping Plant | Units 1 and 2 from February 6 to April 29 for discharge valve installation and motor overhaul |
| | Gianelli Pumping-Generating Plant | Units 1 and 2 from February 23 to expected completion date in 2010 for work on penstock |
| March | Hyatt Powerplant | Unit 1 from March 10 to June 5 for relay replacement and maintenance |
| | Banks Pumping Plant | Unit 10 from March 23 to April 8 for discharge valve repair |
| | Dos Amigos Pumping Plant | Unit 5 from March 23 to April 6 for condition assessment inspection |
| | Buena Vista Pumping Plant | Unit 3 from March 16 to October 9 to rewind motor |
| | Teerink Pumping Plant | Unit 4 from March 26 to September 25 to investigate field ground failure |
| | Teerink Pumping Plant | Units 1 through 3 from March 19 to April 14 for discharge line no. 1 maintenance |
| | Oso Pumping Plant | Unit 4 from March 19 to October 30 to remove water from hydraulic oil pump and repair discharge valve |

Table 11-1 Outages for Maintenance and Repair of Facilities in 2009, by Month

2 of 4

| Month | Facility | Units Taken Out of Service |
|-----------|-------------------------------------|---|
| April | Mojave Siphon Powerplant | Unit 2 from March 16 to April 8 for condition assessment inspection |
| | Oso Pumping Plant | Unit 3 from March 23 to expected completion date in 2010 to resolve seat o-ring leak |
| | Warne Powerplant | Unit 2 from March 23 to April 17 to inspect transformer KY2 and calibrate needles |
| | Gianelli Pumping-Generating Plant | Unit 5 from April 16 to expected completion date in 2010 for butterfly valve leak |
| May | Dos Amigos Pumping Plant | Unit 2 from April 13 to May 20 for maintenance inspection |
| | Hyatt Powerplant | Unit 4 from May 6 to expected completion date in 2010 to investigate high thrust bearing loading |
| | Devil's Den Pumping Plant | Unit 3 from May 17 to June 10 to replace bearings |
| | Devil Canyon Powerplant | Unit 2 from May 6 to May 29 for condition assessment inspection |
| | Pearblossom Pumping Plant | Unit 8 from May 4 to May 22 for condition assessment inspection |
| June | Warne Powerplant | Unit 1 from May 2 to expected completion date in 2010 to repair oil leak, refurbish needle valves, and electrical maintenance |
| | Warne Powerplant | Unit 1 from May 6 to June 18 to refurbish turbine needle |
| | Hyatt Powerplant | Unit 5 from June 2 to June 30 to inspect and de-gas transformer K5A |
| | Hyatt Powerplant | Unit 6 from June 8 to June 23 to check generator/turbine alignment |
| | South Bay Pumping Plant | Unit 4 from June 16 to July 9 to replace defective RTD |
| July | Banks Pumping Plant | Units 1 and 2 from July 13 to August 12 to dewater discharge line no. 1 |
| | Gianelli Pumping-Generating Plant | Unit 7 from July 19 to September 10 to investigate automatic voltage regulator trip |
| | Devil's Den Pumping Plant | Unit 2 from July 15 to August 12 to replace motor bearing |
| August | Mojave Siphon Powerplant | Units 1 through 3 from August 18 to September 2 to investigate ground fault on 13.8 kV bus |
| September | Hyatt Powerplant | Unit 2 from September 18 to expected completion date in 2010 to inspect turbine for defect in impeller plate cover |
| | Thermalito Pumping-Generating Plant | Unit 1 from September 8 to October 5 to replace cooling water piping system |

Table 11-1 Outages for Maintenance and Repair of Facilities in 2009, by Month

3 of 4

| Month | Facility | Units Taken Out of Service |
|----------|-------------------------------------|---|
| October | Banks Pumping Plant | Unit 11 from September 21 to October 8 for relay recalibration |
| | Dos Amigos Pumping Plant | Unit 1 from September 8 to expected completion date in 2010 to replace pump bearing |
| | Pearblossom Pumping Plant | Unit 7 from September 21 to October 16 to replace pump mechanical seal |
| | Pine Flat Powerplant | Unit 3 from September 23 to December 15 to recoat penstock and annual maintenance |
| | Banks Pumping Plant | Unit 11 from October 8 to expected completion date in 2010 for motor differential relay |
| | South Bay Pumping Plant | Units 1 through 9 from October 19 to November 25 for switchyard work and preventative maintenance |
| | Las Perillas Pumping Plant | Unit 4 from October 28 to November 21 to replace pump packing and for preventative maintenance |
| | Edmonston Pumping Plant | Unit 4 from October 1 to expected completion date in 2010 to replace pump |
| | Buena Vista Pumping Plant | Unit 3 from October 13 to October 24 to balance unit |
| | Badger Hill Pumping Plant | Units 5 and 6 from October 28 to November 21 for maintenance of discharge line no. 2 headworks |
| November | Badger Hill Pumping Plant | Units 5 and 6 from October 28 to November 21 for pools 3 to 6 silt removal and preventative maintenance |
| | Pearblossom Pumping Plant | Unit 6 from October 19 to expected completion date in 2010 for motor rotor refurbishment inspection |
| | Hyatt Powerplant | Unit 6 from November 29 to expected completion date in 2010 to address governor control issues |
| | Thermalito Pumping-Generating Plant | Unit 1 from November 30 to December 17 to repair servo and calibrate flow and pressure devices |
| | Banks Pumping Plant | Unit 10 from November 11 to November 23 for discharge valve no. 5 preventative maintenance |
| | South Bay Pumping Plant | Unit 2 and Units 5 through 9 from November 17 to expected completion date in 2010 for preventative maintenance |
| | South Bay Pumping Plant | Units 1, 3, and 4 from November 25 to expected completion date in 2010 for preventative maintenance |
| | Badger Hill Pumping Plant | Units 1 through 4 from November 2 to November 21 for pools 3 through 6 silt removal and preventative maintenance |
| | Las Perillas Pumping Plant | Units 1 through 3 and Units 5 and 6 from November 2 to November 21 for preventative maintenance |
| | Las Perillas Pumping Plant | Units 5 and 6 from November 30 to expected completion date in 2010 to drain and repair discharge line no. 2 |
| | Polonio Pass Pumping Plant | Unit 1 from November 20 to December 11 to troubleshoot breaker inability to stay closed |
| | Devil's Den Pumping Plant | Units 1 through 6 from November 2 to November 21 for pools 3 to 6 silt removal, transformer KYA and KYB leak repair, and preventative maintenance |

Table 11-1 Outages for Maintenance and Repair of Facilities in 2009, by Month

4 of 4

| Month | Facility | Units Taken Out of Service |
|----------|-----------------------------|--|
| | Polonio Pass Pumping Plant | Units 1 through 6 from November 2 to November 17 for Coastal Branch preventative maintenance |
| | Devil Canyon Powerplant | Unit 4 from November 2 to December 3 for condition assessment inspection |
| | Oso Pumping Plant | Unit 3 from November 4 to expected completion date in 2011 for discharge valve |
| | Oso Pumping Plant | Unit 7 from November 30 to December 29 for condition assessment inspection |
| December | Del Valle Pumping Plant | Units 1 through 4 from December 22 to expected completion date in 2010 for a leak in pipeline near discharge valve surge tank |
| | Barker Slough Pumping Plant | Unit 2 from December 14 to December 29 to investigate failure to start |
| | Bluestone Pumping Plant | Unit 1 from December 3 to December 23 to inspect and adjust excitation equipment |
| | Oso Pumping Plant | Unit 6 from December 31 to expected completion date in 2010 to drain water from the discharge valve hydraulic power sump and replace seat o-ring |
| | Pearblossom Pumping Plant | Unit 1 from December 14 to expected completion date in 2010 for condition assessment inspection |
| | Pine Flat Powerplant | Unit 3 from December 28 to expected completion date in 2010 for governor preventative maintenance |



Chapter 12

Engineering, Construction, and Real Estate

Installation of the nonphysical barrier at the Head of Old River.

Significant Events in 2009

In 2009, engineering, construction, and real estate work to enhance, expand, repair, and protect the State Water Project and other facilities within the State continued. Significant projects included South Bay Aqueduct Enlargement, expansion of South Bay Pumping Plant, Edmonston Pumping Plant refurbishment, Hyatt Powerplant pump-turbine refurbishment, and the East Branch Extension Phase I improvements and Phase II projects.

In addition, as a result of calls from the Governor and Legislature to protect the Delta, the Delta Habitat Conservation and Conveyance Program was established in 2008, and in 2009 studies continued to assess potential habitat restoration and water conveyance options.

As of December 31, 2009, the Department of Water Resources (DWR) has spent a net total of \$255.1 million to acquire rights-of-way, recreation, and mitigation land for the SWP.

Information for this chapter was provided by the Division of Engineering.

Initial construction of the State Water Project (SWP) facilities began in 1957 with the relocation of the Western Pacific Railroad facilities and Highway 70 near the City of Oroville to accommodate the SWP Oroville Facilities. Oroville Dam was constructed between 1961 and 1967. Construction of the South Bay Aqueduct (SBA) facilities was started in 1960, and the first SWP water was delivered through the SBA in 1965 to serve Alameda and Santa Clara counties.

In 1963, work began on the California Aqueduct, and by 1968, the SWP was delivering water to long-term contractors in the San Joaquin Valley to the foot of the Tehachapi Mountains. By 1973, with the completion of Edmonston Pumping Plant at the foot of the Tehachapi Mountains and other East Branch conveyance facilities, the SWP was delivering water to Lake Perris at the southernmost point in Riverside County.

In 1974, SWP water was delivered to Los Angeles County through the West Branch Facilities. SWP water was delivered to Napa County in 1968, through the first phase facilities of the North Bay Aqueduct, and to Solano County in 1988 by the second phase facilities. The first SWP water delivery through the Coastal Branch (Phase I) was made in 1968 to Kings and Kern counties.

Prior to the completion of the initial facilities in 1973, work began on the Upper Feather River facilities to supply local water, recreation, and fish enhancement. Power plants, additional pumping units, and turbine-generators that had been deferred from the initial construction of the SWP were built to ensure water quality and fish enhancement in the Delta.

From 1974, through 2009, design and construction activities shifted to repairing concrete lining failures or potential failures of the canal system and concrete pipeline sections; replacing equipment components of existing facilities; enlarging or extending aqueduct reaches; refurbishing pump turbine

units and adding pumps and motors to existing facilities; constructing the Devil Canyon Second Afterbay; constructing Phase II of the Coastal Branch to deliver water to San Luis Obispo and Santa Barbara counties in August 1997; extending the SWP through the East Branch Extension to the San Geronio Pass service area in San Bernardino and Riverside counties; and assessing potential habitat restoration and water conveyance options in the Delta.

Design Activities

In 2009, work to enhance, expand, repair, and protect SWP water delivery facilities continued. Engineering activities supported more efficient water deliveries within the confines of legal constraints, environmental restraints, and power availability. Significant projects included SBA enlargement, South Bay Pumping Plant expansion, and feasibility studies for the East Branch Extension Phase I improvements and Phase II projects. Table 12-1 (at the end of the chapter) provides a list of completed and ongoing design work that was undertaken in 2009.

The Department of Water Resources (DWR) Division of Engineering (DOE) continued to design projects for development into construction contracts. DOE staff worked with the Division of Operations and Maintenance (O&M); Bay-Delta Office; Division of Flood Management; Division of Environmental Services; Office of the Chief Counsel; Department of Fish and Wildlife (formerly Department of Fish and Game);

Department of Boating and Waterways; Department of Transportation; SWP water contractors; California water districts; levee maintenance districts (Sacramento River, San Joaquin River, and Delta); CALFED Bay-Delta Program, U.S. Army Corps of Engineers; Bureau of Reclamation; Federal Energy Regulatory Commission; U.S. Environmental Protection Agency; U.S. Fish and Wildlife Service; National Marine Fisheries Service; and other entities concerned with water resources activities. DOE staff prepared preliminary designs and estimates; developed and administered construction contract documents and carried out construction projects; and conducted special studies of dams, canal embankments, and other SWP facilities.

Studies, reports, and activities continued from previous reporting periods, or initiated in 2009, include the following:

- stability analysis for Oroville, Parish Camp Saddle, Bidwell Canyon Saddle, and Thermalito dams;
- geologic faulting and seismicity studies of SWP and flood control facilities;
- Frank's Tract Pilot Project—conceptual design;
- fish screens at Sherman and Twitchell islands—final design;
- SBA reliability study;
- SBA enlargement and improvement activities;
- seepage repair at Milepost 88.3—final design;
- flood control improvements—Lower Butte Creek, Sutter Bypass, Weir No. 2 replacement;
- concrete encasement of Coastal Aqueduct pipeline for Highway 46 widening;
- Castaic, Pyramid, and Perris dams—emergency release facilities;
- East Branch Enlargement, Phase II preliminary design and environmental documents;
- East Branch Extension, Phase I improvements studies;
- East Branch Extension, Phase II project planning and feasibility studies;
- North Bay Aqueduct alternate intake study;
- Perris Dam outlet tower study;
- Perris Dam embankment remediation;
- Perris Dam emergency release extension—preliminary design;
- analysis of Enterprise Bridge—study;
- analysis of Los Robles Bridge—study;
- Brad Freeman Bike Trail realignment—design;
- early implementation program review—study;
- Edmonston Pumping Plant feasibility study for upgrading seven Baldwin-Lima Hamilton units;
- emergency levee repair—Cache Creek Levee Mile 3.9 and Levee Mile 4.2 left bank—design;
- local bridge seismic safety program—design;
- North of Delta Off-Stream Storage studies—Sites Reservoir Project—water conveyance facilities;
- Oroville O&M Subcenter—garage shop—design;
- Oroville Wildlife Area—emergent wetland creation project—design;
- replace septic tanks and sewage piping, San Joaquin Field Division—design;
- San Joaquin O&M Center heating, ventilation, and air-conditioning system, fire alarm, and paging system replacement—study;
- Sisk Dam—seismic re-evaluation—study;
- Southern Field Division Headquarters project—design;
- Sutter Bypass motor control center replacement—design;
- Tehachapi East Afterbay-Antelope Valley East Kern Water District turnout and mitigation Antelope Valley—design; and

- urban geotechnical evaluation reports review—study.

In 2009, DOE staff completed the following studies and activities:

- SBA Enlargement—Dyer Reservoir—design;
- SWP—remote terminal units replacement—design;
- concrete encasement of coastal pipeline under State Highway 46 widening—design;
- Oroville Field Division access bridges, Craig Access Road and DWR Access Road—study;
- Oroville Field Division spillway repairs—design; and
- flood control improvements, Willow Slough rehabilitation, Sutter Bypass—design.

Environmental Activities

Since the inception of the SWP, environmental issues have increased in magnitude with the enactment of numerous federal and State laws. DWR has complied with these laws by incorporating environmental requirements and conditions into the design and construction phases of projects. A specific section dealing with environmental requirements and the protection of listed species has become an integral part of contract specifications for construction contracts. Contracts are reviewed to ensure compliance with requirements outlined in environmental permits for each contract. In 2009, two projects required continuing environmental review and are described below.

Delta Habitat Conservation and Conveyance Program

In 2008, as a result of calls from the Governor and Legislature to protect the Delta, the Delta Habitat Conservation

and Conveyance Program (DHCCP) was established, prompting studies to assess potential habitat restoration and water conveyance options. DHCCP is conducting an environmental review of the Bay Delta Conservation Plan. The lead agencies conducting the joint environmental review are DWR, Bureau of Reclamation, U.S. Fish and Wildlife Service, and National Marine Fisheries Service.

DHCCP continued to:

- analyze Bay Delta Conservation Plan proposed actions and alternatives through a formal environmental impact statement (EIS)/environmental impact report (EIR) process;
- analyze options and consider areas of concern presented by the public during the EIS/EIR process; and
- develop engineering options for habitat restoration, other stressors, and water conveyance.

The environmental component of the DHCCP includes environmental impact analysis, California Environmental Quality Act and National Environmental Policy Act document preparation, environmental surveys, mitigation, and all associated permitting requirements. Approval of the Bay Delta Conservation Plan, its EIR/EIS, and associated documents is essential to obtaining required permits.

In 2009, the DHCCP accomplished the following:

- submitted and updated draft seismic design criteria for DWR and State Water Contractors' review;
- continued developing responses to comments on the draft conceptual engineering report and began developing the final conceptual engineering report for the isolated conveyance facility east option;

- started developing the draft conceptual engineering report for the proposed alignment of the All-Tunnel alignment option;
- updated the Fremont Weir improvement project's conceptual engineering report and submitted it to DWR;
- facilitated and participated in Restoration Opportunity Area Team meetings;
- met with California Independent System Operator's technical staff to review study requirements and schedule;
- began performing studies necessary to meet the California Independent System Operator's interconnection study objectives;
- finalized the Bay Delta Conservation Plan-DHCCP integrated website design and prepared for the official launch;
- finalized the DHCCP brochure and printed it for public use;
- conducted environmental justice community surveys;
- conducted notification regarding the on-land geotechnical drilling;
- continued developing the supplemental permitting handbook for DHCCP; and
- developed a preliminary permitting schedule for the major permits.

Habitat Restoration

Construction for habitat restoration at the Colusa State Recreation Area (Specification No. 08-13) began in October 2008 and is expected to be completed in December 2011. Restoration will include planting 34,000 oak trees on 140 acres of Colusa Wildlife Area land as mitigation for the Tisdale Bypass sediment removal project.

Construction Activities

DOE worked on 63 construction contracts in 2009. Projects included turbine and pump replacement, pipeline repair, trash rack upgrade at fish hatcheries, and recreational and maintenance facilities

improvements at dam and reservoir sites. Table 12-2 (at the end of the chapter) shows the following information for construction project contracts: contract title, specification number, date the contractor received the Notice to Begin Work, the expected or actual acceptance date (physical completion date is discussed in narratives below), and the actual or estimated contract cost (including change orders for added work). Resolution of contract claims may extend the actual contract closeout beyond the completion or acceptance date.

SWP—General *SWP Control System*

A contract (Specification No. 08-12) to replace portions of the aging SWP Supervisory Control and Data Acquisition System began in May 2009. This contract will furnish and install 176 controller assemblies for the replacement of remote terminal units located throughout the SWP and will furnish 16 controller assemblies for Devil Canyon Powerplant and DWR's development lab at the Joint Operations Center. The controller assemblies will be assembled from components furnished by the contractor (programmable logic controllers, sequence-of-event recorders, fiber patch panels, modems, and other equipment). Completion is scheduled for May 2013.

Communication Cable

Work began in July 2009 (Specification No. 09-02) to monitor, test, and repair approximately 450 miles of communication cable and appurtenances along the California Aqueduct. This contract, which is scheduled to be completed in the summer of 2010, also includes provisions for emergency repairs as directed.

Upper Feather River Division *Grizzly Valley Dam and Lake Davis*

A fish containment system at the Grizzly Valley Dam outlet structure was constructed

from June 2006 through November 2007 to prevent northern pike from exiting Lake Davis and entering Big Grizzly Creek (Specification No. 06-11). Contract closeout activities continued through 2009. DWR accepted the project in February 2009.

Oroville Division

Hyatt Powerplant

Refurbishment of turbine Units 1, 3, and 5 began in February 1999 (Specification No. 98-22) and was completed in May 2004. Refurbishment included manufacture, delivery, installation, and testing of new runners, wicket gates, bushings, and other components, and sandblasting, repairing, and coating water passages. The contractor continued working on its final contract submittals, including operations and maintenance manuals, throughout 2009. Contract acceptance is expected to be delayed to 2011 due to outstanding submittals.

Refurbishment of pump-turbine Units 2, 4, and 6 started in November 2001 (Specification No. 01-11). Acceptance testing completed in 2007, but preparation and delivery of the final submittals continued through April 2009. Refurbishment included manufacture, delivery, installation, and testing of new runners, wicket gates, bushings, and other components, and sandblasting, repairing, and coating water passages. Acceptance is expected in May 2011, pending DWR's receipt of final submittals.

At Diversion Tunnel No. 2, removal of the baffle ring and repair of the concrete liner immediately downstream of the steel tunnel liner began and was completed in March 2009 (Specification No. 09-05). Additionally, after a July 22, 2009, failure of the pressure relief wall in the River Valve Chamber, work to repair the wall and appurtenant structures was added to this contract by change order. The added

work is expected to complete in June 2010, and contract acceptance is expected in December 2010.

Lake Oroville

Construction of a new Stage III boat ramp, parking lot, and access road in Bidwell Canyon began in November 2008 (Specification No. 08-18) and was completed in November 2009. This new ramp will allow boating access to Lake Oroville when the water surface elevation drops below 700 feet. DWR's acceptance of the contract work is expected in 2010.

Thermalito Afterbay Dam

A contract (Specification 08-05) to replace and decommission seven existing wells to improve well productivity began in May 2008, was completed in October 2008, and was accepted in June 2009. The new wells will provide more water to the fish hatchery annex and improve seepage control.

Warehouse, Civil Maintenance Building, and Shop Building

Roof replacement for the Warehouse, Civil Maintenance Building, and Welding Shop began in June 2008 and was completed in September 2008 (Specification No. 08-07). Added work at the Delta O&M Center (North San Joaquin Division) and at the Sacramento Maintenance Yard (Table 12-2, Miscellaneous Activities) will extend the contract acceptance into 2011.

North Bay Aqueduct

Napa Turnout Reservoir

Replacement of the Napa Turnout Reservoir (Specification No. 07-01) began in April 2007 and work is expected to be completed in late 2011. The contract includes replacing the existing tank with two, 5-million gallon, steel, covered tanks and installing piping and appurtenances. Acceptance will be extended, likely to January 2012, due to

added corrosion monitoring equipment, a test station, and additional miscellaneous work at the valve vault.

Pipeline Reach N3B

Emergency repairs to the Reach N3B pipeline at approximately Milepost 23.77 were performed under a change order to Specification No. 08-14. The work, which was begun and completed in January 2009, included a gravel access road, excavation to identify the leak in the pipeline, video inspection of the pipeline, concrete encasement, and backfill. Acceptance of the project is expected in September 2011.

South Bay Aqueduct

Del Valle Branch Pipeline and Surge Tank

Due to a December 22, 2009, landslide on the hillside north of the Del Valle Branch Pipeline Surge Tank, emergency repairs were made. Under a change order to Specification No. 08-14, the work included replacement of 373 feet of damaged 60-inch diameter prestressed concrete cylinder pipe with steel pipe, stabilization and repair of the hillside, removal and replacement of the existing surge tank foundation and valve vault, and encasement of approximately 385 feet of the existing prestressed concrete cylinder pipe. Repairs are expected to be completed in November 2010, with contract acceptance in September 2011.

Dyer-Altamont Check 2

Removal of the existing rotating trash rack system and installation of a temporary trash screen at Dyer-Altamont Check 2 began and was completed in July 2009 under a change order to Specification No. 08-14. Acceptance is expected in September 2011.

Santa Clara Pipeline

Repairs to the Santa Clara Pipeline at Mileposts 32.44, 33.09, 36.11, and 37.41 began in April 2009 and was completed in September 2009 under change orders to

Specification No. 08-14. Work varied from site to site and included excavation, lining and joint repairs, new seals, sediment removal, and backfill. Acceptance is expected in September 2011.

South Bay Aqueduct Enlargement and Improvement

The SBA Enlargement and Improvement projects will restore the first 16.38 miles of the SBA to the 300 cubic feet per second (cfs) design flow and increase the design capacity by up to 130 cfs. This work will enlarge the South Bay Pumping Plant to accommodate four additional 45 cfs units, construct a third discharge line, construct Dyer Reservoir, enlarge the canal, and modify associated structures.

Dyer Reservoir

Work to construct a drainage diversion at Dyer Reservoir (Specification No. 06-24) began in September 2006 and was completed in August 2007. DWR extended the contract to allow a temporary bridge to remain in place due to environmental restrictions. The contract was completed in October 2008 and accepted in January 2009.

In late July 2009, construction began on the new 500 acre-foot (425 acre-feet [af] of active storage) Dyer Reservoir (Specification No. 09-01). Contract features include the reservoir embankment, inlet and outlet structures, installation of steel pipe, road construction, and a turnout structure. Work is expected to be completed in spring 2011.

Site work to create new wetlands on the Egan property was performed under a change order to Specification No. 08-14. Work began in November 2008 and was completed in January 2009; project acceptance is expected in September 2011.

Siphon and Check Structure Modifications

Modifications to and replacements for siphon and check structures (Specification No. 08-14) began in September 2008, and completion is expected in March 2010. Work included construction of the concrete canal lining, check structures, new outlet and inlet transition structures, and operating roads; removal and reinstallation of an existing trash rack system; installation of a new turnout chamber, test stations, and cathodic protection; and removal of sediment and waste. Acceptance is expected in 2011 after change order work is completed:

- SBA, repair Santa Clara Pipeline;
- SBA, modify trash rack/rake system at Dyer-Altamont Check 2;
- SBA, repair Del Valle Branch Pipeline;
- SBA, site work for wetlands, Dyer Reservoir; and
- North Bay Aqueduct, repair at Milepost 23.77 (Pipeline Reach N3B).

A contract (Specification No. 08-21) to fabricate 10 radial gates, radial gate hoist assemblies (with associated control systems), and electric actuators for SBA check structures began in January 2009 and is expected to be completed in January 2011. Also included in this contract are the fabrication of stop logs and stop log storage racks, fabrication of one trash removal system for Dyer-Altamont Check No. 2, and two trash removal systems for Del Valle Check No. 7.

Transmission Line and Modifications to Banks Switchyard

Construction of a new 69 kilovolt (kV) transmission line from South Bay Pumping Plant to Banks Pumping Plant and modifications to the Banks Switchyard began in October 2009 (Specification No. 09-06). The new transmission line will increase the South Bay Pumping Plant power supply capacity and reliability while decreasing the unit cost of power. The Banks Switchyard

modifications will allow a power step down from 230 kV to 69 kV. Project work also includes installation of DWR-furnished transformers and equipment; furnishing and installing prefabricated control buildings, 13.8 kV distribution line poles and equipment, a new substation, switchgear, and equipment; and removing and disposing of existing 13.8 kV and 5 kV power distribution lines. Completion is expected in late 2010.

South Bay Pumping Plant

The following contracts for the SBA Enlargement project at South Bay Pumping Plant continued throughout 2009:

- Specification No. 04-05: furnish 45-cfs pump and motor units for Unit Nos. 10 through 13 and one spare pump and motor. Work began in November 2004 and continued throughout 2009. Completion is expected in late 2010.
- Specification No. 04-20: furnish valves, actuators, and hydraulic power units. Work began in May 2005. The equipment was furnished in June 2007. Repairs to the butterfly valves were added to this contract by change order; completion is expected in mid-2010.
- Specification No. 05-10: furnish switchyard equipment. Work began in September 2005 and is expected to be completed in late 2010. Work added by a contract change order will furnish equipment for the Banks Switchyard expansion to accommodate the new 69 kV transmission line from Banks Pumping Plant to South Bay Pumping Plant.
- Specification No. 05-05: furnish 5 kV switchgear. Work began in October 2005 and is expected to be completed in late 2010.
- Specification No. 06-04: Enlarge pumping plant facilities—initial. Work began in August 2006 and is expected to be completed in mid-2010.

- Specification No. 07-02: furnish power transformers. Work began in April 2007 and is expected to be completed in late 2010.
- Specification No. 07-18: Work began in December 2007 and is expected to be completed in mid-2011. Added work included repairs to a water system pipeline adjacent to Banks Pumping Plant (see North San Joaquin Division for details).

South Bay Pumping Plant Discharge Line and Brushy Creek Pipeline No. 3

A contract to construct a South Bay Pumping Plant discharge line and Brushy Creek Pipeline No. 3 (Specification No. 06-09) began in December 2006, was completed in September 2008, and was accepted in June 2009.

Surge Tank No. 3

Construction of a 120-foot tall steel surge tank began in July 2008 (Specification No. 08-09) and was completed in December 2009. Acceptance is expected in early 2010. Work included excavation, backfill, embankment, erosion control, wiring, grounding, and lighting.

North San Joaquin Division

Delta Operations and Maintenance Center

Replacement of the existing 150 kilowatt (kW) standby engine generator with a new 500 kW diesel engine generator and automatic transfer switch began in September 2008 under a change order to Specification No. 06-10. The existing generator was considered undersized and unable to provide reliable operation during an outage. Installation and startup of the generator and transfer switch cannot be made until portions of the 69 kV transmission line contract are completed. Completion and acceptance of the project is expected in 2011.

Banks Pumping Plant

Repairs to the 10-inch water system pipeline adjacent to Banks Pumping Plant began in October 2009 and was completed in November 2009. These repairs were performed under a change order to Specification No. 07-18 (South Bay Pumping Plant Completion), which is expected to be accepted in mid-2011.

Hillside improvements began in July 2008 under a contract (Specification No. 08-10) that included removal of a retaining wall; hillside excavation; and installation of slope benches, a retaining wall, subsurface drainage, box structures, curbs, V-ditches, fencing, seeding, and erosion control. Work was added to include the refurbishment of existing wells, increased excavation limits, modifications to the V-ditch, replacement of HDPE piping due to a grass fire after work was completed, and cost reseeding of burned area. All work was completed in November 2009, and acceptance is expected in March 2010.

San Luis Division

Dos Amigos Pumping Plant

A contract (Specification No. 08-06) to design, manufacture, deliver, install, and test one complete automatic trash rake system and to manufacture, deliver, and install trash racks began in January 2009 and is expected to be completed in early 2011.

Gianelli Pumping-Generating Plant and Dos Amigos Pumping Plant

A contract (Specification No. 04-08) to refurbish the existing carbon dioxide fire suppression system for motor generator Units No. 1 through 8 and the oil purifier room at Gianelli and motor Units No. 1 through 6 and the oil purifier room at Dos Amigos began in July 2004. The original work was essentially complete by November 2006, but work added by a contract change order

will extend completion and acceptance to early 2010. The added work included:

- replacing and refurbishing fire extinguishers in San Luis Field Division;
- installing an escape platform at Dos Amigos and safety platforms at Gianelli;
- repairing the carbon dioxide systems at Edmonston, Chrisman, and Teerink pumping plants;
- replacing the fire alarm systems at San Luis Operations and Maintenance Center and at Coalinga Operations and Maintenance Center; and
- inspecting and repairing the fire sprinkler system at the San Luis Operations and Maintenance Center warehouse.

Gianelli Pumping-Generating Plant, Dos Amigos Pumping Plant, Coalinga O&M Subcenter, Check Sites 9 through 21, and Flowmeters at Check Sites 12 and 21

A contract (Specification No. 06-10) to replace standby engine generators began in August 2006. The original work was completed in October 2009; the added change order work listed below is expected to be completed in April 2011. Acceptance is expected in September 2011. Added work included:

- furnishing and installing engine generators for the Delta Operations and Maintenance Center, Banks Pumping Plant, the Feather River Fish Hatchery, and the Skinner Fish Facility;
- furnishing and installing a backup generator for University of California, Davis; and
- furnishing and installing an electrical panel at the Dos Amigos siphon house.

San Luis Canal

Due to subsidence that caused buckling and cracking in the canal lining, a contract to remove and replace damaged portions of the concrete lining along the California Aqueduct

between Mileposts 56.40 and 164.90 began in November 2007 (Specification No. 07-20). Completion is expected in 2010, and acceptance in early 2011. Added work included:

- construction of a stability berm at Milepost 88.3;
- dive survey and repairs at California Aqueduct Mileposts 89.02 and 138.96;
- Coastal Branch repairs (see Coastal Branch Reach 31A and Devil's Den Forebay sections in this chapter);
- Coastal Branch repairs between Milepost 1.16 and 4.27; and
- repair of irrigation crossings at Mileposts 113.02R and 113.42L

A contract to install a sheet pile wall through the crest of the canal embankment (waterside edge of the access road) at California Aqueduct Milepost 88.3 to reduce seepage through the left canal embankment began in September 2009 (Specification No. 09-07). Completion is expected in July 2010.

***South San Joaquin Division
Buena Vista Pumping Plant***

A contract (Specification No. 07-05) to design, manufacture, test, and deliver spare coils (17,000 horsepower (hp) and 8,500 hp) and materials began in June 2007 and is expected to be completed in mid-2010. DWR expects to assess liquidated damages for late delivery of equipment.

Chrisman Pumping Plant

Work to furnish and install a 2,800-foot long potable water line, valves, and valve boxes began in February 2009 and was completed in July 2009. DWR accepted the project in September 2009 (Specification No. 08-20).

Lost Hills O&M Subcenter

Contract work began in August 2007 to connect existing water and sewer lines to the Lost Hills Utility District lines, and was essentially complete in November 2007 (Specification No. 07-06). DWR accepted the project in June 2009.

Teerink Pumping Plant

Recoating of the interiors of Discharge Lines No. 1 through 7 began in January 2007 (Specification No. 06-25) and was completed in July 2009. Added work by a change order included removing the existing coating and recoating the first 25 feet of Discharge Lines 1 through 7. The project was accepted in July 2009.

Tehachapi Division

Edmonston Pumping Plant

A contract to replace pump Units W2, W4, W6, and W8 (Specification No. 02-10) began in June 2003 and continued throughout 2009. Completion is scheduled for March 2011. Work consisted of:

- designing, fabricating, and testing a four-stage pump model and a single-stage pump model, and furnishing a pump model test program report;
- designing, manufacturing, delivering, storing, and installing four pumps to replace existing pumps;
- furnishing spare parts, auxiliary equipment, tools, and templates;
- modifying existing pump foundations, if required, for the new pumps;
- applying coatings; and
- providing liaison services.

Mojave Division

Cedar Springs Dam Maintenance Subcenter

In January 2008, work began to construct a 14,400 square-foot civil maintenance and mobile equipment building to replace the

outdated Cedar Springs Dam Maintenance Subcenter (Specification No. 07-25). Work continued throughout 2009, with completion expected in August 2010.

Horsethief Creek Bridge

A contract to build a new one-lane railroad flatcar bridge over Horsethief Creek began in September 2007 (Specification No. 07-12); the work was completed in February 2008 and accepted in July 2009. The bridge replaced partially blocked culverts, provided a larger area for Horsethief Creek storm water to pass under the Mojave Siphon Maintenance Road, improved access from Mojave Siphon Powerplant to Check 66, and protected the nearby Mojave Siphon pipelines.

Mojave Siphon Powerplant

A contract to furnish, install, and encase approximately 60 feet of 10-foot diameter steel pipe from the existing tee on Barrel No. 3 to the abandoned prestressed concrete cylinder pipe (Barrel No. 4) began in August 2007 (Specification No. 07-09). Work was completed in May 2008 and accepted in October 2009. The work also included construction of a blowoff to allow drainage of the bypass line for maintenance activities.

Santa Ana Division

Devil Canyon Powerplant Second Afterbay

Under a change order to Specification 06-21, the contractor furnished and installed a flowmeter at the Devil Canyon Powerplant Second Afterbay. The added work began in February 2009 and was completed in November 2009. Completion is expected in early 2011.

East Branch Extension Phase I

Construction of the East Branch Extension Phase I began with the issuance of a Notice to Begin Work on February 26, 1999, for pipeline Reaches 1 and 2. Phase I of the project is being constructed to convey

8,650 af of SWP water annually to the San Gorgonio Pass Water Agency service area, with provisions to provide San Bernardino Valley Municipal Water District deliveries to Yucaipa Valley. Located in San Bernardino and Riverside counties, the project facilities will consist of existing pipelines, three new pipeline reaches, three new pump stations, and a new reservoir. The official groundbreaking ceremony took place in Yucaipa on August 23, 1999.

Below are brief descriptions of the remaining construction contracts.

Pump Stations. Work began in November 1999 on the contract (Specification No. 99-17) to design, manufacture, shop test, and deliver three 4,500 gallons per minute (gpm) and one 9,000 gpm vertical turbine pumps for Greenspot Pump Station; two 4,500 gpm and one 9,000 gpm vertical turbine pumps for Crafton Hills Pump Station; and two 3,600 gpm vertical turbine pumps for Cherry Valley Pump Station. The contract calls for electric motors, variable frequency drives, appurtenant equipment, and associated training programs. Completion of this contract was scheduled for December 2003, but was extended to March 2006 due to a change order for additional pump units and related components for Greenspot and Crafton Hills pump stations. The added units are complete except for acceptance testing, and contract acceptance is expected in April 2010.

Work on a contract (Specification No. 06-21) to install spare units at Greenspot, Crafton Hills, and Cherry Valley pump stations, and to replace the existing control valves and unit discharge isolation valves for Greenspot Pump Station Units No. 1 through 4 began in October 2006. Work continued throughout 2009 and is expected to be completed in early 2010. The work includes:

- furnishing and installing a pump, motor, variable frequency drive, programmable

logic controller cubicle, and motor control center unit breaker assembly at Cherry Valley Pump Station;

- furnishing and installing switchgear at Greenspot and Crafton Hills pump stations;
- installing programmable logic controllers, valves, piping, tubing, fittings, hangers, supports, and appurtenances at all three pump stations;
- installing DWR-furnished pumps and motors at Greenspot and Crafton Hills pump stations;
- installing a DWR-furnished variable frequency drive at Greenspot Pump Station;
- removing existing valves, piping, and appurtenances; and
- manufacturing and delivering tools and spare parts to all three pump stations.

Added work included modifying the switchgear to allow front access to the 5 kV bus and providing a flowmeter for Devil Canyon Second Afterbay.

Yucaipa Connector Pipeline. Fabrication and testing of 42-inch and 48-inch AWWA (American Water Works Association-standard) butterfly valves for the Yucaipa Connector Pipeline is being performed under a contract (Specification 09-04) that began in August 2009. Completion is expected in mid-2010.

Perris Dam

In 2005, a study of the Perris Dam foundation indicated the presence of thin, sandy layers that are susceptible to liquefaction and loss of strength during a large seismic event. As a result, work began in October 2009 on two test sections at Perris Dam to evaluate construction methods for future dam remediation (Specification No. 09-17). One of the test sections will evaluate the dewatering technique required for a stable excavation; the second test section, which includes two cement deep-soil mixing cells, will evaluate

the optimal parameters and techniques for installing cement deep-soil mixing columns. Completion is expected in March 2010.

Santa Ana Pipeline

Phase IV of the excavation, inspection, and repair of the Santa Ana Pipeline began in November 2007 and continued throughout 2009 (Specification No. 07-23). Work was added by change order to encase approximately 411 linear feet of the Santa Ana Pipeline to protect the pipeline during construction and operation of the Metro Commuter Rail System Eastern Maintenance Facility in the city of Colton. Additionally, work will be added in 2010 to perform emergency repairs at Las Perillas Pumping Plant. Completion and acceptance are expected in 2010.

Phase V of the excavation, inspection, and repair of the Santa Ana Pipeline (Specification No. 09-19) began in November 2009 and is scheduled to be completed in February 2010.

West Branch

Gorman Creek Channel Improvements

An emergency contract (Specification No. 07-03) began in January 2007 to remove and replace 1,000 feet of damaged concrete liner near Station 115, improve the liner foundation, inspect and patch approximately 11,000 feet of open channel, and remove concrete and silt from Hungry Valley Siphon. The repairs, which were required to ensure scheduled West Branch water deliveries, were completed in February 2007. However, after flow resumed, inspections found that 11,000 feet of the channel upstream of Station 115 were in need of urgent repair. The additional repairs began in September 2007 and were completed in June 2008. The project was accepted in February 2009.

Oso Pumping Plant

Work began in December 2007 to construct a 14,400 square foot civil maintenance and mobile equipment building at Oso Pumping Plant (Specification No. 07-22). Work is expected to be completed in early 2010; however, required added work, including a water treatment facility, may delay occupancy until 2011.

Vista del Lago Visitors Center

A contract (Specification No. 08-04) to repair erosion, install a water intake system, modify the building, and improve drainage began in July 2008 and was completed in November 2009. Acceptance is expected in June 2010.

Coastal Branch

Reach 31A and Devil's Den Forebay

Repairs to the Coastal Branch canal lining from Milepost 1.16 to 4.27 and installation of a sump and repairs to concrete at Devil's Den Forebay began and was completed in November 2009 under construction orders (Specification 07-20).

Construction Activities in Multiple Divisions

Upper Feather River and Oroville Divisions

Oroville Dam, Antelope Dam, Frenchman Dam, and Grizzly Valley Dam. A contract to repair four spillways at Oroville, Antelope, Frenchman, and Grizzly Valley dams began in September 2009 and was completed in December 2009 (Specification 09-14). Repairs were made on spalled concrete, voids, cracks, and expansion and contraction joints. Acceptance of the project is expected in June 2010.

Oroville, North San Joaquin, San Luis, and Mojave Divisions and West Branch

Oroville, Delta, San Luis, and Southern Field Divisions. In September 2007, work began on a contract to seal and pave roads and parking areas in Oroville, Delta, San Luis, and Southern Field Divisions (Specification No. 07-16). Work was completed in February 2008, and the project was accepted in May 2009. Added work included repairs at saturated soil areas, revised guard rails, and scaffolding for the maintenance and inspection of a Kaplan runner at Thermalito Powerplant.

Delta Facilities, Suisun Marsh Facilities, South Bay Aqueduct, and North San Joaquin, South San Joaquin, and Mojave Divisions

Work on a multiyear (2007 through 2009) contract (Specification No. 06-26) to install and remove seasonal temporary rock barriers, provide temporary agricultural pumping facilities, and dredge in designated South Delta waterways (Middle River, Old River, and Grant Line Canal) began in January 2007. Work to install the nonphysical barrier in spring 2010 was added to this contract, which is expected to be completed by summer 2010.

The temporary barriers are installed to enhance water levels and circulation in the South Delta for local agricultural diversion, to assist fish migration, and to gather hydraulic data for the design of future permanent barriers. Changed or added work by construction orders included:

- North San Joaquin Division: weed harvesting and mapping at Clifton Court Forebay;
- Suisun Marsh Facilities: removal and replacement of flashboards at Montezuma Slough;
- Mojave Division: diving, Pearblossom Pumping Plant;

- North San Joaquin Division: delta smelt refugium at the Skinner Fish Facility;
- North San Joaquin Division: replacement of the water quality facility, Banks Pumping Plant;
- Oroville Division: crane rental, Thermalito Diversion Dam;
- backflush system, Sherman Island;
- observation well rehabilitation, Roberts Island;
- replace gate valves, Tom Paine Slough;
- inspect siphon with fish screen, Twitchell and Sherman islands;
- relocate emergency flood fight materials, Yorba Canyon Mission and Fabian Tract;
- SBA: relocate storage container, Dyer Reservoir;
- Delta Facilities: provide office trailer, Old River; and
- Delta Facilities: change the spring barrier at the Head of Old River from a rock barrier to an experimental bubble curtain.

North San Joaquin, San Luis, and South San Joaquin Divisions and Coastal Branch

Banks Pumping Plant and Gianelli Pumping-Generating Plant. A contract began in May 2003 to design, manufacture, deliver, and install automatic digital voltage regulators for Banks Pumping Plant and Gianelli Pumping-Generating Plant (Specification No. 02-12). The physical work was completed in March 2006; however, contract acceptance is expected to be delayed until 2010 due to incomplete contractor submittals.

Banks Pumping Plant and Teerink Pumping Plant. A contract to furnish spare coils and materials for Banks Pumping Plant and Teerink Pumping Plant began in February 2007 (Specification No. 06-27). The contract will be extended to furnish one set of spare coils for a 30,000 hp motor at Pearblossom Pumping Plant. Completion is expected in 2011.

San Luis and San Joaquin Field Divisions. A contract (Specification No. 08-16) to seal and pave roads and parking areas at various locations in San Luis and San Joaquin field divisions began in September 2008 and was completed in November 2008. Acceptance is expected in early 2010.

West Branch, Mojave Division, and Santa Ana Division

Oso Pumping Plant, Quail Lake Outlet, Peace Valley Pipeline, Pearblossom Pumping Plant, and Pearblossom O&M Subcenter. A contract to replace and recoat roofs (Specification No. 08-02) at Oso Pumping Plant, Quail Lake Outlet, Peace Valley Pipeline (West Branch), Pearblossom Pumping Plant, and Pearblossom O&M Subcenter (Mojave Division) began in May 2008 and was completed in December 2008. The project was accepted in June 2009. Added work included removal and replacement of the roof at the Devil Canyon Afterbay Control Building (Santa Ana Division) and roof repairs at Pearblossom Pumping Plant (Mojave Division).

Oso Pumping Plant, Lower Quail Canal Outlet, Warne Powerplant, Pyramid Dam, Angeles Tunnel, Alamo Powerplant, Pearblossom Powerplant, Pearblossom Sand Blast Building, and Devil Canyon Second Afterbay. In September 2008, work began on a contract to seal and pave roads and parking areas at the sites listed above (Specification No. 08-17). The work is expected to be completed in January 2010.

Miscellaneous Construction Activities

The following non-SWP construction activities are categorized as miscellaneous.

Demonstration Aeration Facility

A contract to install a demonstration aeration facility on Dock 20 at Rough and Ready Island in the Port of Stockton (Specification No. 05-06) began in

December 2005 and was completed in January 2009. The project was accepted in May 2009. Work included installing:

- two 30-inch diameter steel U-tube casings and two 20-inch diameter U-tubes;
- 24-inch steel piping and 30-inch high-density polyethylene diffuser piping;
- two vertical turbine pump-motor units;
- four fish screens with two air burst systems; and
- electrical items including a programmable logic controller, water flow meter, instrumentation, and distribution panel and meter.

Added work included decommissioning an existing meteorological tower and installing a new tower; modifications to the initial design; additional coatings; providing and installing a liquid oxygen storage tank and distribution system; removing and replacing asphalt concrete; and purchasing a storage container.

Emergency Levee Erosion Repairs

The contracts listed below provided emergency levee erosion repairs and included most or all of the following work:

- fencing;
- removing trees, brush, and debris;
- levee repairs;
- placing in-stream woody material; and
- planting, seeding, and irrigation.

Phase II Bear River Mile 1.2L and Sacramento River Miles 99.5R and 182.0R. Contract work (Specification No. 07-10) began in July 2007 and was completed in May 2009. The project was accepted in September 2009.

Phase II Sutter Slough Miles 24.8L and 25.4R and Sacramento River Miles 70.7R, 71.7R, and 73.0R. Contract work (Specification No. 07-13) began in August 2007 and

was completed in May 2009. Added work included purchase and delivery of fascine bundles, filling excavated areas at Sacramento River Mile 70.7R, and furnishing and installing a stabilized construction entrance and exit at the Hood facility. The project was accepted in September 2009.

San Joaquin River Mile 42.3R, Paradise Cut Mile 3.8L, and Mormon Slough Mile 11.8R.

Contract work (Specification No. 08-15) began in August 2008 and was completed in November 2009. Contract acceptance is expected in March 2010.

Erosion Repair and Bank Protection

Work began in October 2009 to repair levee erosion and protect the river banks along the San Joaquin River at Miles 41.4L, 42.1R, 42.5R, and 42.8R (Specification No. 09-18). Work includes fencing; removal of trees, brush, debris, and a 6-inch pipe from the levee; protection of native trees; levee repairs and rock slope protection; installation of erosion control fabric; and planting, seeding, irrigation, and plant establishment. Completion is expected mid-2011.

Levee Road Repairs

A contract (Specification No. 08-08) to repair 45 miles of gravel levee roads in the Sacramento and Sutter Maintenance Yard areas began in July 2008 and was completed in November 2008. The project was accepted in April 2009.

Habitat Restoration

A contract to restore habitat (Specification No. 08-13) at the Colusa State Recreation Area began in October 2008 and is expected to be completed in 2011. This work to mitigate the Tisdale Bypass sediment removal project (Specification No. 07-14) includes planting approximately 34,000 oak trees and other plants, as well as irrigation.

Radial Gate Seal Installation

Work began in December 2009 on a minor contract to install seals on the radial gates at the Chowchilla Canal Bypass control structure (Specification No. 09-20). The work includes preparing the existing gates and fabricating and installing the new gate seals. Completion is expected in February 2010, with acceptance in mid-2010.

Replacements

The roof and chiller at the Sacramento Maintenance Yard were replaced under a change order to Specification No. 08-07. Work began in September 2008 and was completed in March 2009, and contract acceptance is expected in early 2011 after completion of additional added work in the North San Joaquin Division.

Real Estate Branch Activities

DWR has spent a net total of \$255.1 million to acquire rights-of-way, recreation, and mitigation land for the SWP as of December 31, 2009. DWR conducted the following real estate activities from January 1 through December 31, 2009.

SWP Acquisitions

Activities related to acquisitions were as follows:

- acquired one parcel (42.97 acres in-fee) for \$14,300 for the Elderberry Forebay fencing project;
- executed three agreements for the California Irrigation Management Information System program;
- secured a right-of-entry and obtained temporary and permanent easements from Wente Vineyards for the SBA improvement and enlargement project;
- completed Addenda No. 4 and 5 to the agreement to place a conservation easement over 168.39 acres, and agreement with Alameda County Flood

- Control and Water Conservation District, Zone 7 (Alameda-Zone 7) to release an eminent domain case, and the U.S. Department of Energy for raising their pipeline at Milepost 13.55 for the SBA improvement and enlargement project;
- executed an Acknowledgement Memorandum with Delta Engineering Branch to install a flow monitoring station at Clifton Court Forebay intake, and obtained approval from State Lands Commission to install waterside piles within State Lands Commission jurisdiction as part of the Doughty Cut flow monitoring station project;
- secured an encroachment permit from the Department of Transportation for the East Branch Extension Project—Phase I;
- secured three court-ordered entries for the Franks Tract Project;
- executed an owner-initiated appraisal agreement for the Suisun Marsh tidal restoration project;
- secured four encroachment permits from the city of Moreno Valley for the Santa Ana Pipeline Repairs—Phase V project; and
- secured a New Pedestrian Grade Separation Crossing Agreement with the Union Pacific Railroad for the Brad B. Freeman Bike Trail project.

Temporary Permits

DWR obtained 82 temporary permits, including:

- 2009 SBA Seepage Emergency Repair at Milepost 36.11, 1;
- 2009 California Aqueduct seepage repair sites, 1;
- Doughty Cut Flow Monitoring Station Project, 2;
- East Branch Extension—Phase I, 5;
- East Branch Extension—Phase II, 26;
- Franks Tract Project, 2;
- SDIP—permanent barriers and Middle River dredging, 12;
- San Joaquin River Restoration Project, 17;
- SBA Improvement and Enlargement Project, 1;
- Sutter County Monitoring Wells, 2;
- SBA Milepost 39 Repair, 4;
- Lake Perris Dam Remediation, 6;
- Meins Landing Tidal Restoration, 1;
- Suisun Marsh Tidal Restoration Project, 1; and
- Santa Ana Pipeline Repairs—Phase V, 2009, 1.

SWP Property Management

Property management activities during 2009 were as follows:

- renewed 10 leases;
- managed leasing activities of SWP nonoperating properties, which produced an income of \$286,275;
- processed 27 encroachment permit applications and executed 18;
- collected fees of \$80,047 for review and inspection costs related to encroachment permit applications; and
- coordinated review of 12 tentative tract map developments within 1 mile of the California Aqueduct.

SWP Appraisals

Activities related to appraisals were as follows:

- completed seven appraisals covering nine parcels for pipeline easements and/or temporary construction easements, one memo appraisal, and one appraisal review in support of the East Branch Extension Project;
- completed one appraisal for one parcel in support of the SBA improvement and enlargement project;
- completed one appraisal for one parcel in support of the West Delta Wildlife Management Program; and
- completed five lease rate appraisals.

Table 12-1 Design Activities, January 1, 2009, through December 31, 2009, by Division

| Division and Facility | Design Activity | Date Design Began | Design Actual/ Estimated Completion Date |
|--|--|-------------------|---|
| South Bay Aqueduct | | | |
| South Bay Aqueduct Enlargement | | | |
| South Bay Pumping Plant | 69 kV transmission line and switchyard modifications | October 2006 | August 2009 |
| Canal | Canal modification | July 2003 | March 2010 |
| Dyer Reservoir | Construct a new 425 af reservoir | September 2003 | June 2009 |
| Fish screens at Sherman and Twitchell islands | New fish screens at existing siphons—10 sites | September 2007 | November 2010 |
| San Luis Division | | | |
| Dos Amigos Pumping Plant | Replace trash racks and trash rake | August 2007 | September 2010 |
| South San Joaquin Division | | | |
| Teerink Pumping Plant | Recoat interior of discharge lines | December 2005 | May 2009 |
| Tehachapi Division | | | |
| Edmonston Pumping Plant | Pump replacement, Units W2, W4, W6, and W8 | August 2001 | October 2011 |
| Edmonston, Teerink, Chrisman, and Buena Vista pumping plants | Replace septic tanks and sewer piping | August 2007 | April 2013 |
| Mojave Division | | | |
| Pearblossom Administration Building | Construct new administration building | March 2008 | November 2010 |
| Tehachapi East Afterbay | AVEK turnout and mitigation | October 2006 | February 2009 |
| Santa Ana Division | | | |
| East Branch Extension—Phase I Improvements | Project planning and engineering feasibility studies for the Crafton Hills Reservoir enlargement | July 2007 | April 2011 |
| East Branch Extension—Phase II | Project planning and engineering feasibility studies | July 2008 | September 2012 |
| Perris Dam | Dam remediation | January 2007 | March 2013 |
| Perris Dam | Emergency outlet extension | October 2006 | September 2011 |
| West Branch | | | |
| Los Robles Bridge | Seismic analysis | August 2005 | June 2009 |
| Miscellaneous | | | |
| Sutter Bypass | Flood control improvements—Weir No. 2 rehabilitation | July 2006 | November 2010 |
| | Flood control improvements—Willow Slough rehabilitation | July 2006 | November 2010 |
| | Motor control center replacement | August 2008 | December 2012 |
| Sycamore Creek | Sediment removal | October 2006 | November 2009 |

Table 12-2 Construction Activities, January 1, 2009, through December 31, 2009, by Division

Sheet 1 of 4

| Construction Division and Facility | Construction Contract (Specification Number) | Starting Date (NTBW ^a) | Acceptance Date (Expected or Actual) | Contract Costs (In Thousands of Dollars) |
|---|---|------------------------------------|--------------------------------------|--|
| State Water Project—General | | | | |
| State Water Project Supervisory Control and Data Acquisition System | Replace remote terminal units (08-12) | May 2009 | July 2013 | 11,500 |
| Communication Cable | Monitor, test, and repair copper communication cable and voice and data equipment (09-02) | July 2009 | August 2012 | 1,173 |
| Upper Feather River Division | | | | |
| Grizzly Valley Dam and Lake Davis | Construct Lake Davis fish containment facility (06-11) | June 2006 | February 2009 | 1,569 |
| Oroville Division | | | | |
| Hyatt Powerplant | Refurbish pump-turbine Units 1, 3, and 5 (98-22) | February 1999 | September 2011 | 9,864 |
| | Refurbish pump-turbine Units 2, 4, and 6 (01-11) | November 2001 | May 2011 | 16,966 |
| | Remove baffle ring, repair concrete liner, Diversion Tunnel No. 2, and repair River Outlet pressure relief wall (09-05) | March 2009 | December 2010 | 1,959 |
| Lake Oroville | Construct Bidwell Canyon Stage III boat ramp (08-18) | November 2008 | December 2010 | 1,585 |
| Thermalito Afterbay Dam | Replace wells (08-05) | May 2008 | June 2009 | 1,657 |
| Warehouse, Civil Maintenance Building, and Shop Building | Replace roofs (08-07) | June 2008 | September 2011 | 384 |
| North Bay Aqueduct | | | | |
| Napa Turnout Reservoir | Replace reservoir (07-01) | April 2007 | January 2012 | 11,281 |
| Pipeline Reach N3B | Repair pipeline, Milepost 23.77 (08-14 change order) | January 2009 | September 2011 | 131 |
| South Bay Aqueduct | | | | |
| Del Valle Branch Pipeline and Surge Tank | Repair pipeline at landslide (08-14 change order) | December 2009 | September 2011 | 9,522 |
| Dyer-Altamont Check 2 | Remove existing trash rack system and install temporary trash screen (08-14 change order) | July 2009 | September 2011 | 15 |
| Santa Clara Pipeline | Repair leaks on the Santa Clara Pipeline at Mileposts 32.44, 33.09, 36.11, and 37.41 (08-14 change order) | April 2009 | September 2011 | 265 |
| South Bay Aqueduct Enlargement and Improvement | | | | |
| Dyer Reservoir | Construct drainage diversion (06-24) | September 2006 | January 2009 | 749 |
| | Construct Dyer Reservoir (09-01) | July 2009 | March 2011 | 13,275 |
| | Create wetlands, Egan Property (08-14 change order) | November 2008 | September 2011 | 101 |
| Siphon and Check Structure Modifications | Modify and replace siphons and check structures (08-14) | September 2008 | September 2011 | 3,916 |
| | Furnish check structure equipment (08-21) | January 2009 | January 2011 | 3,300 |
| Transmission Line and Modifications to Banks Switchyard | Construct 69 kV transmission line and modify Banks Switchyard (09-06) | October 2009 | January 2011 | 8,460 |

Table 12-2 Construction Activities, January 1, 2009, through December 31, 2009, by Division

Sheet 2 of 4

| Construction Division and Facility | Construction Contract (Specification Number) | Starting Date (NTBW ^a) | Acceptance Date (Expected or Actual) | Contract Costs (In Thousands of Dollars) |
|---|--|------------------------------------|--------------------------------------|--|
| South Bay Pumping Plant | Furnish 45 cfs pump and motor units and one spare pump and motor (04-05) | November 2004 | June 2011 | 7,370 |
| | Furnish valves, actuators, and hydraulic power unit (04-20) | May 2005 | June 2011 | 2,258 |
| | Furnish switchyard equipment (05-10) | September 2005 | June 2011 | 1,496 |
| | Furnish 5 kV switchgear (05-05) | October 2005 | June 2011 | 3,571 |
| | Construct pumping plant enlargement—initial facilities (06-04) | August 2006 | June 2011 | 16,604 |
| | Furnish power transformers (07-02) | April 2007 | June 2011 | 4,666 |
| | Complete pumping plant enlargement (07-18) | December 2007 | May 2011 | 18,674 |
| South Bay Pumping Plant Discharge Line and Brushy Creek Pipeline No. 3 | Construct discharge line and Brushy Creek Pipeline No. 3 (06-09) | December 2006 | June 2009 | 27,487 |
| Surge Tank No. 3 | Construct Surge Tank No. 3 (08-09) | July 2008 | March 2010 | 1,635 |
| North San Joaquin Division | | | | |
| Delta Operations and Maintenance Center | Generator replacement (06-10 change order) | September 2008 | September 2011 | 208 |
| Banks Pumping Plant | Repair water system pipeline (07-18 change order) | October 2009 | May 2011 | 27 |
| | Improve hillside (08-10) | July 2008 | March 2010 | 1,053 |
| San Luis Division | | | | |
| Dos Amigos Pumping Plant | Replace trash rake system and trash racks (08-06) | January 2009 | April 2011 | 3,407 |
| Gianelli Pumping-Generating Plant and Dos Amigos Pumping Plant | Refurbish CO ₂ system (04-08) | July 2004 | May 2010 | 1,698 |
| Gianelli Pumping-Generating Plant, Dos Amigos Pumping Plant, Coalinga O&M Subcenter, Check Sites, and Flowmeter Sites | Replace standby engine generators (06-10) | August 2006 | September 2011 | 2,084 |
| San Luis Canal | Repair canal lining, Mileposts 56.40 to 164.90 (07-20) | November 2007 | February 2011 | 8,520 |
| | Repair canal seepage, Milepost 88.30 (09-07) | September 2009 | October 2010 | 1,841 |
| South San Joaquin Division | | | | |
| Buena Vista Pumping Plant | Furnish spare coils and materials (07-05) | June 2007 | March 2012 | 3,784 |
| Chrisman Pumping Plant | Install potable water line (08-20) | February 2009 | September 2009 | 251 |
| Lost Hills O&M Subcenter | Water and sewer service connection (07-06) | August 2007 | June 2009 | 316 |
| Teerink Pumping Plant | Recoat interior of discharge lines (06-25) | January 2007 | July 2009 | 5,865 |
| Tehachapi Division | | | | |
| Edmonston Pumping Plant | Replace pumps, Units W2, W4, W6, and W8 (02-10) | June 2003 | May 2011 | 35,600 |
| Mojave Division | | | | |
| Cedar Springs Dam Maintenance Station | Construct civil maintenance and mobile equipment building (07-25) | January 2008 | December 2010 | 3,700 |

Table 12-2 Construction Activities, January 1, 2009, through December 31, 2009, by Division

Sheet 3 of 4

| Construction Division and Facility | Construction Contract (Specification Number) | Starting Date (NTBW ^a) | Acceptance Date (Expected or Actual) | Contract Costs (In Thousands of Dollars) |
|---|--|------------------------------------|--------------------------------------|--|
| Horsethief Creek Bridge | Construct flatcar bridge (07-12) | September 2007 | July 2009 | 1,713 |
| Mojave Siphon Powerplant | Connect penstock bypass line (07-09) | August 2007 | October 2009 | 1,592 |
| Santa Ana Division | | | | |
| Devil Canyon Powerplant Second Afterbay | Furnish and install flowmeter (06-21 change order) | February 2009 | December 2011 | 135 |
| East Branch Extension Phase I | | | | |
| Greenspot, Crafton Hills, and Cherry Valley Pump Stations | Furnish pumps, motors, and variable frequency drives (99-17) | November 1999 | April 2011 | 4,657 |
| | Furnish and install additional units (06-21) | October 2006 | December 2011 | 4,062 |
| Yucaipa Connector Pipeline | Furnish 42-inch and 48-inch AWWA valves (09-04) | August 2009 | August 2011 | 233 |
| Perris Dam | Evaluate dewatering and cement deep soil mixing methods (09-17) | October 2009 | October 2010 | 2,075 |
| Santa Ana Pipeline | Excavate, inspect, and repair, Phase IV (07-23) | November 2007 | May 2010 | 5,501 |
| | Excavate, inspect, and repair, Phase V (09-19) | November 2009 | October 2010 | 827 |
| West Branch | | | | |
| Gorman Creek Channel Improvements | Repair channel (emergency) (07-03) | January 2007 | February 2009 | 12,065 |
| Oso Pumping Plant | Construct civil maintenance and mobile equipment building (07-22) | December 2007 | December 2011 | 4,048 |
| Vista del Lago Visitors Center | Repair erosion, install water intake system, modify building, and improve drainage (08-04) | July 2008 | June 2010 | 1,533 |
| Coastal Branch | | | | |
| Reach 31A and Devil's Den Forebay | Repair liner, Mileposts 1.16 to 4.27, and repair concrete (07-20 construction order) | November 2009 | March 2010 | 713 |
| Multiple Divisions | | | | |
| Upper Feather River and Oroville Divisions | Repair spillways, Oroville Dam, Antelope Dam, Frenchman Dam, Grizzly Valley Dam (09-14) | September 2009 | June 2010 | 1,487 |
| Oroville, North San Joaquin, San Luis, and Mojave Divisions and West Branch | Seal and pave roads and parking areas—2007 (07-16) | September 2007 | May 2009 | 3,069 |
| Delta Facilities, Suisun Marsh Facilities, South Bay Aqueduct, and North San Joaquin, South San Joaquin, and Mojave Divisions | Install and remove temporary rock barriers—2007 to 2009 (06-26) | January 2007 | October 2010 | 10,452 |
| North San Joaquin, San Luis, and South San Joaquin Divisions and Coastal Branch | | | | |
| Banks Pumping Plant and Gianelli Pumping-Generating Plant | Design, manufacture, deliver, and install digital voltage regulators (02-12) | May 2003 | August 2010 | 2,082 |
| Banks Pumping Plant and Teerink Pumping Plant | Furnish spare coils and materials (06-27) | February 2007 | September 2011 | 2,551 |

Table 12-2 Construction Activities, January 1, 2009, through December 31, 2009, by Division

Sheet 4 of 4

| Construction Division and Facility | Construction Contract (Specification Number) | Starting Date (NTBW ^a) | Acceptance Date (Expected or Actual) | Contract Costs (In Thousands of Dollars) |
|---|--|------------------------------------|--------------------------------------|--|
| San Luis and San Joaquin Field Divisions | Seal and pave roads and parking areas—2008, (08-16) | September 2008 | April 2010 | 2,979 |
| West Branch, Mojave, and Santa Ana Divisions | | | | |
| Oso Pumping Plant, Quail Lake Outlet, Peace Valley Pipeline, Pearblossom Pumping Plant, and Pearblossom O&M Subcenter | Replace and recoat roofs (08-02) | May 2008 | June 2009 | 997 |
| Oso Pumping Plant, Lower Quail Canal Outlet, Warne Powerplant, Pyramid Dam, Angeles Tunnel, Alamo Powerplant, Pearblossom Powerplant, Pearblossom Sand Blast Building, and Devil Canyon Second Afterbay | Seal and pave roads and parking areas—2008, Southern Field Division (08-17) | September 2008 | April 2010 | 2,625 |
| Miscellaneous Activities | | | | |
| Demonstration Aeration Facility | Install demonstration aeration facility, Rough and Ready Island, Dock 20 (05-06) | December 2005 | May 2009 | 3,841 |
| Emergency Levee Erosion Repairs | | | | |
| Phase II—Bear River Mile 1.2L and Sacramento River Miles 99.5R and 182.0R | Repair levee erosion—emergency (07-10) | July 2007 | September 2009 | 5,326 |
| Phase II—Sutter Slough Miles 24.8L and 25.4R and Sacramento River Miles 70.7R, 71.7R, and 73.0R | Repair levee erosion—emergency (07-13) | August 2007 | September 2009 | 4,686 |
| San Joaquin River Mile 42.3R, Paradise Cut Mile 3.8L, and Mormon Slough Mile 11.8R | Repair levee erosion—emergency (08-15) | August 2008 | March 2010 | 1,422 |
| Erosion Repair and Bank Protection | Repair erosion and protect banks, San Joaquin River Miles 41.4L, 42.1R, 42.5R, and 42.8R (09-18) | October 2009 | September 2011 | 934 |
| Levee Road Repairs | Repair levee roads, Sacramento and Sutter Maintenance Yards (08-08) | July 2008 | April 2009 | 2,291 |
| Habitat Restoration | Restore habitat, Colusa State Recreation Area (08-13) | October 2008 | December 2011 | 995 |
| Radial Gate Seal Installation | Install seals, Chowchilla Canal Bypass Control Gates (09-20) | December 2009 | May 2010 | 80 |
| Replacements | Replace roof and chiller, Sacramento Maintenance Yard (08-07 change order) | September 2008 | September 2011 | 113 |

^a Notice to Begin Work.



Chapter 13 Recreation

Picnic area at Thermalito Forebay.

Significant Events in 2009

California Department of Parks and Recreation (California State Parks) staff from Lake Oroville State Recreation Area (LOSRA) worked with California State Parks Northern Buttes District and Headquarters staff to award a new 30-year concession contract to Forever Resorts to operate the Bidwell Canyon Marina.

SWP facilities supported an estimated 4.2 million recreation days of use in 2009, unchanged from 2008

DWR, California State Parks, and the Department of Boating and Waterways (DBW) completed more than 30 recreation facility improvements, including upgrades to campgrounds, day-use areas, boat ramps, and visitors centers at Lake Oroville, Lake del Valle, San Luis Reservoir, Pyramid Lake, Silverwood Lake, and Lake Perris.

The Department of Water Resources (DWR) hosted four, 2-week Aquatic Adventure Camps for 225 youth. The camp's goals are to teach aquatic rescue, aquatic first aid, CPR, swimming, and to show youth how to operate different types of vessels safely on the water.

The North Forebay Aquatic Center, operated by the Associated Students of California State University, Chico, greatly expanded their public programs. In addition to their extensive rental fleet of canoes and kayaks, they began offering lessons in sailing and sculling. The aquatic center also sponsored many special events, including participating in the annual Catch a Special Thrill (C.A.S.T.) event at Lake Oroville.

The Department of Fish and Wildlife (DFW; formerly the Department of Fish and Game) planted over 265,000 "catchable" sized Coho salmon this year into Lake Oroville, the only body of water in California with a legally catchable population of Coho. In addition, DFW planted 20,000 Kokanee salmon fingerlings into Lake del Valle. A total of 880,000 trout and salmon were planted in State Water Project (SWP) reservoirs in 2009.

Information for this chapter was provided by the Division of Integrated Regional Water Management, Public Affairs Office, Division of Environmental Services, and the State Water Project Analysis Office.

The State Water Project (SWP) is a multipurpose project that provides recreational benefits to millions of Californians. In addition to providing water supply, flood control, and habitat for fish and wildlife, the SWP offers extensive and varied recreational opportunities—tours, sightseeing, fishing, hunting, picnicking, camping, boating, water skiing, bicycling, hiking, and swimming. Under the Davis-Dolwig Act (DDA), these recreational opportunities, as well as fish and wildlife enhancements, are not allocable as water and power costs to the SWP water contractors. They are financed by Department of Water Resources' (DWR) existing authorities under the Burns-Porter Act and appropriations from the Legislature specifically for these purposes.

Recreation Areas

The SWP has 37 developed recreation areas, or sites, throughout California, including 18 developed fishing access sites. Figure 13-1 shows the name and location of each area.

- Lake Oroville Visitors Center, 87,400 recreation days;
- Romero Overlook Visitors Center, San Luis Reservoir, 132,400 recreation days; and
- Vista del Lago Visitors Center, Pyramid Lake, 144,500 recreation days.

Recreation Use

In 2009, SWP facilities supported an estimated 4.2 million recreation days of use (Table 13-1), the same level reported in 2008. A recreation day is defined as one individual user visiting a recreation site along the SWP within all or part of a one-day period. Attendance dropped at San Luis State Recreation Area (SRA) due to service reductions, closure of the Basalt Campground, and they began calculating attendance differently.

Most SWP recreation use is concentrated at the major reservoirs with 34 percent occurring at the lakes in Oroville Field Division and 46 percent of the total SWP recreational use in 2009 occurring at the four major reservoirs in Southern California: Pyramid Lake, Castaic Lake, Silverwood Lake, and Lake Perris. Since the SWP began delivering water in 1962, over 204 million recreation days have been recorded at SWP recreation facilities. Visitation at DWR's three SWP educational visitors centers totaled:

Overall, recreation usage of 4.2 million recreation days at the SWP reservoirs listed in Table 13-1 contributed significantly to the more than 59.2 million day-use visitors at the 278 units of the California State Park System in fiscal year 2009–2010.

Facilities

In 2009, the following activities occurred or were planned for SWP facilities.

Planning

Lake Oroville State Recreation Area

A Recreation Trails Program grant was submitted by the California Department of Parks and Recreation (California State Parks) for trail and day use improvements at Rattlesnake Hill and Potter's Ravine in Lake Oroville State Recreation Area (LOSRA).

California State Parks staff from LOSRA worked with California State Parks' Northern Buttes District and Headquarters staff to award a new 30-year concession contract to Forever Resorts to operate the Bidwell



Figure 13-1 Names and Locations of SWP Recreation Areas

Table 13-1 Estimated^a Recreation Days in 2009, by Field Division and Facility

| Field Division and Facility | Number of Recreation Days (rounded) |
|---|-------------------------------------|
| Oroville Field Division | |
| Frenchman Lake | 57,400 e |
| Antelope Lake | 26,100 c |
| Lake Davis | 28,000 e |
| Lake Oroville and Thermalito Forebay | 826,900 |
| Thermalito Afterbay and Oroville Wildlife Area | 273,300 |
| Feather River Fish Hatchery | 144,700 |
| Lake Oroville Visitors Center | 87,400 |
| <i>Subtotal</i> | <i>1,443,800</i> |
| Delta Field Division | |
| Lake del Valle | 364,500 |
| Bethany Reservoir | 21,300 |
| Fishing Access Sites | |
| Niels Hansen | 200 e |
| California Aqueduct: | |
| Walk-in Fishing | 700 e |
| Bikeway | 200 e |
| White Slough Wildlife Area | 11,500 e |
| <i>Subtotal</i> | <i>398,400</i> |
| San Luis Field Division | |
| San Luis Reservoir State Recreation Area, includes San Luis Reservoir, O'Neill Forebay, and Los Banos Reservoir | 244,200 c |
| Romero Overlook Visitors Center | 132,400 |
| California Aqueduct: | |
| Walk-in Fishing | 12,500 e |
| Wildlife Areas | 11,500 e |
| <i>Subtotal</i> | <i>400,600</i> |
| San Joaquin Field Division | |
| Fishing Access Sites include Kettleman City, Lost Hills, Buttonwillow, and California Aqueduct Walk-in Fishing | 15,400 e |
| <i>Subtotal</i> | <i>15,400</i> |
| Southern Field Division | |
| Silverwood Lake | 340,700 |
| Lake Perris | 646,900 |
| Vista del Lago Visitors Center | 144,500 |
| Pyramid Lake | 132,400 |
| Castaic Lake and Castaic Lagoon | 684,700 c,1 |
| Fishing Access Sites: | |
| Quail Lake | 1,400 |
| 77th Street East | 200 e |
| Longview Road | 100 e |
| California Aqueduct: | |
| Walk-in Fishing | 2,700 e |
| Bikeway | 1,200 e |
| <i>Subtotal</i> | <i>1,954,800</i> |
| Total for Recreational Sites | 3,848,700 |
| Total for Visitors Centers | 364,300 |
| Grand Total | 4,213,000 |

^a These values are provided by numerous sources and vary in their degree of accuracy. Recreation days are based on counts except where marked "e," which are based on partial data; "c" indicates that the agency that collected the data changed its method of calculating these values in 2009 so that comparison of these 2009 data to previous years' data at this location may not be equivalent. "1" indicates the County of Los Angeles Department of Parks and Recreation (LADPR) changed its method of counting attendance in 2009 only. The attendance reported by LADPR was 924,900. To maintain consistency with prior and future reports, the value reported in this table is the mean for this facility from 1998 to 2008.

Canyon Marina. This concessionaire, which had also been operating the nearby Lake Oroville Marina at Lime Saddle for several years, began operations at Bidwell Canyon Marina on December 1, 2009.

New Facilities

During 2009, new facilities were completed at the following sites.

Lake Oroville State Recreation Area

California State Parks constructed four miles of new trail extending the North Fork Trail almost to Bloomer Cove. Funding was provided by a Recreation Trails Program grant.

California State Parks completed a wildland fuels reduction project along Kelly Ridge.

San Luis Reservoir State Recreation Area

California State Parks began construction of new water treatment plants and sewage lift stations at Basalt and San Luis Creek campgrounds.

California State Parks installed new motorized gates at San Luis Creek, Basalt, and Los Banos campgrounds, and at Dinosaur Point boat ramp.

Silverwood Lake State Recreation Area

The Department of Boating and Waterways (DBW) installed electrical lighting to illuminate the parking lot at Sawpit Canyon boat ramp. The new lighting included a warning sign and a boat ramp directional sign.

Improvements to Facilities

During 2009, improvements were made at the following facilities.

Lake Oroville State Recreation Area

California State Parks used a grant from the California Integrated Waste Management

Board to remove 2,000 old tires originally installed as fish habitat in Lake Oroville. The tires were not only ecologically inappropriate, but in some cases could pose a hazard to boaters, and were also a breeding habitat for mosquitoes.

California State Parks rangers took advantage of low water levels to remove several abandoned vehicles from the lake. Local tow companies donated time and equipment to assist with removing the vehicles.

California State Parks added an interpretive panel next to the Mother Orange Tree at its district headquarters.

California State Parks added a visitors center exhibit about Ishi, the last of the Yahi Indians; the display includes lifelike manikins.

California State Parks completed a major maintenance project to reline the old sewer pipes and lift station at Loafer Creek campground. These improvements resulted in a lower-maintenance utility system.

Lake del Valle State Recreation Area

DBW began replacing the west-side dock with a new boat dock to accommodate access for users with limited mobility.

Pyramid Lake State Recreation Area

DBW extended the west-side and east-side boarding docks, improved the boarding dock ramp at Emigrant Landing, and replaced the access ramp with a dock to accommodate access for users with limited mobility.

The U.S. Forest Service made upgrades to the Water Treatment Plant at Emigrant Landing between 2008 and 2009.

DWR replaced picnic tables and recoated shade ramadas at Emigrant Landing.

DWR removed rebar and repaired a retaining wall, removed the barbecue grills, replaced picnic tables, and recoated the shade ramadas at Yellowbar Boat-In Site.

DBW removed an existing vault toilet and replaced it with two single-unit precast vault toilets, and added concrete sidewalks, three concrete patios, picnic tables, and shade structures at Bear Trap Boat-In Site.

DBW installed a new boarding dock at Bear Trap Boat-In Site after the facility burned down during the 2006 Day Fire.

DWR replaced picnic tables and recoated shade ramadas at Serrano Beach Boat-In Site.

DWR installed a new water intake line to the water treatment plant, replaced picnic tables, and recoated shade ramadas at Spanish Point Recreation Area.

DBW installed a new boarding dock at the Vaquero boat ramp.

DWR replaced picnic tables and recoated shade ramadas at Vaquero Beach.

Silverwood Lake State Recreation Area

California State Parks funded a large Campground and Day Use Improvement Project, which included installing lifeguard towers on the swim beaches, ramadas at day-use areas, campground improvements, installation of RV hook-ups, and construction of a nature center. The project was supported by Proposition 84 bond funds.

DBW began a large rehabilitation project at the Serrano Beach Boat-In Site. This project included new restrooms to accommodate access for users with limited mobility, ramadas, a boat dock to accommodate access for users with limited mobility, barbecue grills, construction of a concrete access path, picnic tables, installation of a

pile-guided boarding dock system with a 60-foot steel frame of a fiberglass-reinforced plastic deck, and an 80-foot aluminum gangway. Construction will be completed in spring 2010.

California State Parks installed a water line along Sawpit Road and Black Oak Road for fire suppression, funded by a California State Parks-deferred maintenance fund.

Lake Perris State Recreation Area

DBW replaced the bottom 140 feet of the 5-lane boat launch ramp at Ramp 5. The parking and path of travel to the ramp were upgraded to meet current California Building Code and to accommodate access for users with limited mobility.

California State Parks resurfaced the roads in Parking Lot 8 and in some of the campgrounds.

California State Parks reroofed the Moreno Entrance station building.

Recreation Activities

The SWP, with its many reservoirs and hundreds of miles of aqueducts, offers Californians many recreational opportunities. From Antelope Lake in Northern California to Lake Perris in Southern California, the SWP includes facilities for anglers, boaters, campers, hikers, cyclists, and many others. While DWR manages the routing of water through the reservoirs, the recreational facilities are operated variously by federal, State, and local agencies and, in many cases, their private concessionaires. Visitors to these facilities can swim, water ski, and picnic, as well as other activities. See Figure 13-2 for the various types of recreation available along the SWP.

Lake Oroville State Recreation Area

LOSRA interpretive staff presented a wide variety of popular interpretive programs and

special events including Frontier Christmas, Bidwell Bar Days, campfire programs, Junior Ranger and Junior Cub programs, a Halloween party (Superstition Saturday), and nature walks. In addition, park staff expanded their outreach for the first time to both Lime Saddle and Bidwell campgrounds. Interpretive programs continue to grow as a result of a creative and dedicated staff.

Castaic Lake State Recreation Area

The County of Los Angeles Department of Parks and Recreation sponsored the following activities:

- hosted three Junior Lifeguard programs for 300 participants;
- conducted two Aquatic Adventure Camp sessions for 120 participants;
- held seven moonlight fishing fun events for 300 participants;
- hosted “Splash in the Water” events with an average of 25–40 children who learned about water safety, kayaking, canoeing, and sailing;
- taught 26 moonlight kayak classes with 30 participants in each class;
- held three kayak camping programs with a total of 65 participants who traveled by kayak to remote camping locations;
- presented 10 campfire programs to more than 300 individuals; and
- along with DWR, hosted a Catch a Special Thrill (C.A.S.T.) fishing event for 40 participating disabled and disadvantaged children.

Silverwood Lake State Recreation Area

California State Parks sponsored the following activities:

- held six Adopt-A-School programs for 720 students;
- held a Coastal Clean-up Day where 26 volunteers cleaned up the lake shoreline;

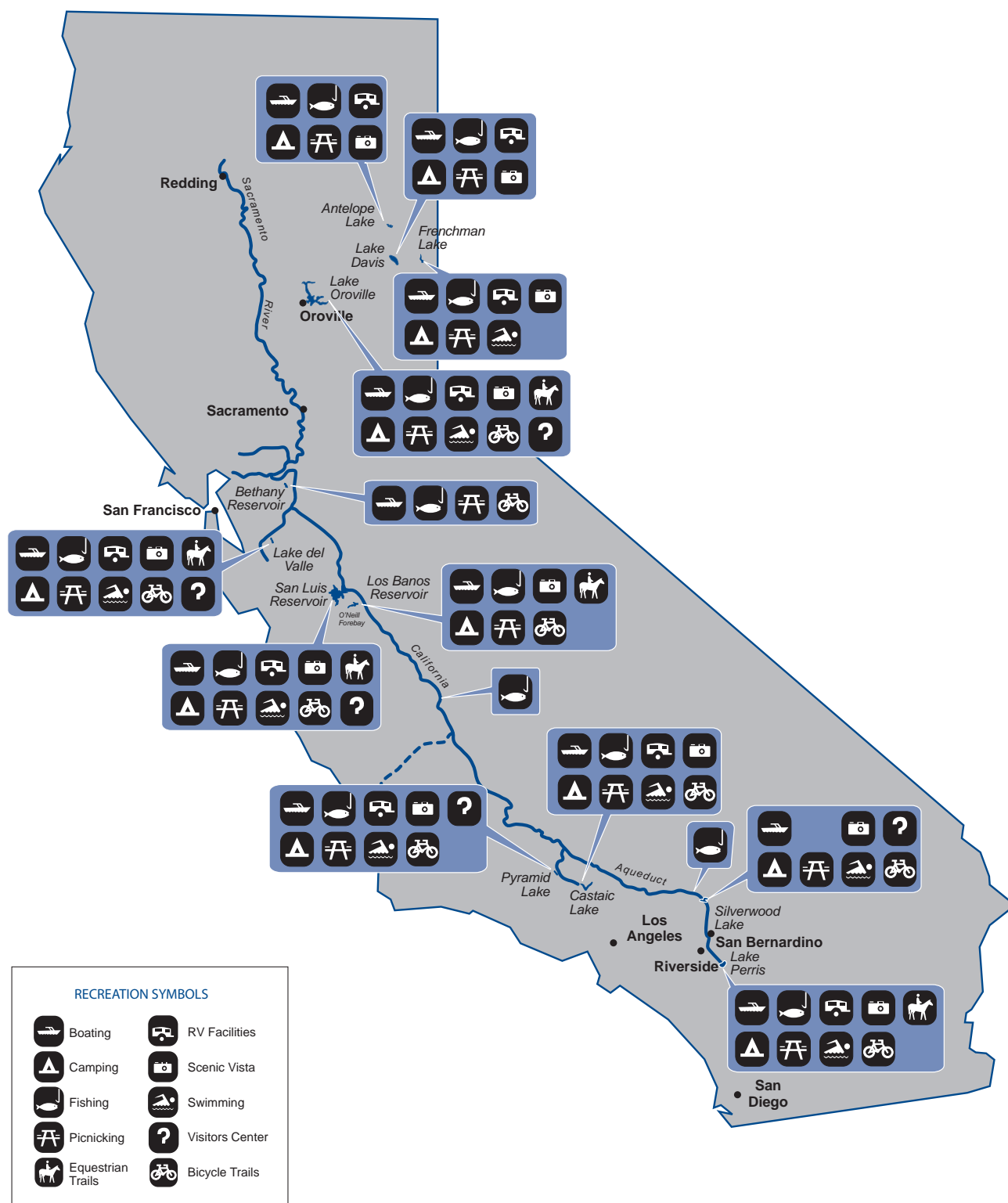


Figure 13-2 Types of Recreation along the SWP

- hosted Earth Day activities with 24 volunteers assisting on a variety of projects;
- hosted 22 campfire programs for 1,250 visitors; and
- along with DWR, hosted the first annual C.A.S.T. fishing event on Silverwood Lake, which paired 30 disabled and underprivileged children with experienced fishermen for a day of fishing.

Lake Perris State Recreation Area

California State Parks sponsored the following activities:

- hosted a Junior Ranger Day Camp for 15 participants over 5 days. The participants learned about archeology, wildlife, personal safety, and basic ecology. They also had opportunities to swim, hike, and take a boat trip to Alessandro Island;
- hosted a Junior Lifeguard program for 17 participants aged 8–15. This four-week program taught children about natural and cultural resources, first aid, and CPR; it also helped children gain experience needed to apply for a job as a State Lifeguard;
- hosted a Junior Ranger program conducted by a State Park Interpreter for 229 participants aged 3–15. Programs were held Saturday mornings from Memorial Day weekend through Labor Day;
- along with DWR, hosted two sessions of Aquatic Adventure Camp. More than 100 children participated in this program and learned basic first aid, CPR, how to manage basic aquatic emergencies, swimming strokes, and a variety of aquatic recreational activities. The Riverside County Health Department presented a program on nutrition, and Eastern Municipal Water District taught children about water quality; and

- DWR and its sister agencies hosted a C.A.S.T. fishing event for 50 disabled and disadvantaged children.

Oroville Recreation Plan

The Oroville Facilities, including LOSRA, Oroville Wildlife Area, and adjacent DWR facilities, are operated in conformance with the 1993 Amended Recreation Plan that was approved by the Federal Energy Regulatory Commission (FERC) in their 1994 Order 2100-054. In 2006, DWR and its Settlement Agreement (SA) signatories submitted a new Settlement Agreement Recreation Management Plan (SARMP, March 2006) for FERC approval, which is expected sometime in 2011 or later, pending a new FERC license.

Additional need-based recreation improvements identified and proposed in the SARMP are anticipated to be constructed when FERC issues new license terms and conditions. The new license terms and conditions are expected to be consistent with the proposed SARMP. In the meantime, DWR and its DDA collaborating partners California State Parks, DBW, and the Department of Fish and Wildlife (DFW; formerly the Department of Fish and Game), will continue to operate Oroville Facilities recreational installations consistent with the existing FERC license (renewed annually) and its associated 1993 Amended Recreation Management Plan.

Fish Plantings

In 2009, DFW planted 879,500 fish in SWP reservoirs (see Table 13-2), less than the 1.6 million fish planted in 2008, but more than the 574,000 fish planted in 2007. More trout were stocked in California reservoirs during 2008 due to Fish and Game Code Section 13007. Budget constraints limited the ability of the State to continue this level of stocking during 2009.

Table 13-2 Fish Planted by Department of Fish and Wildlife in 2009 (Thousands)

| Location and Size | Eagle Lake Trout | Brook Trout | Rainbow Trout | Coho Salmon | Chinook Salmon | Kokanee Salmon | Total for Lake |
|---------------------|------------------|-------------|---------------|---------------------------|----------------|----------------|----------------|
| Antelope Lake | | | | | | | 13.6 |
| Catchables | 6.4 | | 7.2 | | | | |
| Lake Davis | | | | | | | 44.2 |
| Catchables | 34.5 | | | | | | |
| Super-Catchables | 9.2 | | | | | | |
| Trophy | | | 0.5 | | | | |
| Frenchman Reservoir | | | | | | | 284.4 |
| Fingerlings | 209.1 | | | | | | |
| Sub-Catchables | 39.1 | | | | | | |
| Catchables | 36.2 | | | | | | |
| Lake Oroville | | | | | | | 256.5 |
| Catchables | | | | 256.5 | | | |
| Thermalito Forebay | - | - | - | N O F I S H P L A N T E D | - | - | - |
| Lake del Valle | | | | | | | 73.9 |
| Fingerlings | | | | | 5.5 | 20.1 | |
| Catchables | 19.2 | | 29.2 | | | | |
| Los Banos Reservoir | | | | | | | 3.8 |
| Catchables | 3.8 | | | | | | |
| Pyramid Lake | | | | | | | 27.5 |
| Catchables | | | 27.5 | | | | |
| Castaic Lake | | | | | | | 55.1 |
| Catchables | 1.8 | | 53.3 | | | | |
| Castaic Lagoon | | | | | | | 59.9 |
| Catchables | 1.8 | | 58.1 | | | | |
| Silverwood Lake | | | | | | | 29.6 |
| Catchables | | | 29.4 | | | | |
| Trophy | | | 0.3 | | | | |
| Lake Perris | | | | | | | 31.0 |
| Catchables | 2.3 | | 26.8 | | | | |
| Super-Catchables | | | 1.4 | | | | |
| Trophy | | | 0.52 | | | | |
| TOTAL | 363.3 | 0.0 | 234.1 | 256.5 | 5.5 | 20.1 | 879.5 |

Note: DFWs Hatchery Division provided this information. They use the following size classes:
 Fingerlings = 16.1 or more fish/lb; Sub-Catchables = 6.1 to 16 fish/lb; Catchables = 1 to 6 fish/lb;
 Super-Catchables = 0.99 to 0.34 fish/lb; and Trophy is less than 0.32 fish/lb.

While some reservoirs received significantly fewer fish in 2009 than in 2008, Frenchman Lake received more than five times as many fish in 2009. Fish planting also increased slightly in Lake del Valle, Castaic Lagoon, and Silverwood Lake.

In 2008, following 2007's treatment of rotenone to eliminate northern pike, Lake Davis was restocked with 813,700 trout. In 2009, DFW continued stocking Lake Davis with an additional 34,500 "catchable" sized Eagle Lake rainbow trout, 9,200 "super-catchable" sized Eagle Lake rainbow trout, and 500 trophy-sized rainbow trout, for a total of 44,200 rainbow trout.

SWP Deliveries for Recreation

DWR has an agreement with California State Parks to provide onshore recreation water at several SWP facilities in an amount prorated to the yearly SWP Table A allocation. Per the 2009 40 percent SWP Table A allocation, maximum diversion amounts under the onshore recreation agreement were allocated at 40 percent, or a total of 2,712 af, as follows: 1,100 af at San Luis Reservoir, 160 af at Lake del Valle, 932 af at Castaic Lake and Castaic Lagoon, 500 af at Lake Perris, and 20 af at Bethany Reservoir. Actual deliveries under the agreement totaled 755 af as follows: 13 af at San Luis Reservoir, 133 af at Lake del Valle, 164 af at Castaic Lake, 445 af at Lake Perris, and 0 af at Bethany Reservoir. In addition, 75 af was delivered to California State Parks at Silverwood Lake and 31 af at Pyramid Lake. Further detail on these deliveries is provided in Chapter 9, Water Contracts and Deliveries.

Recreation Financing

Prior to 2001, DWR reported capital costs allocated to fish and wildlife enhancement and recreation in Bulletin 132, Appendix D, *Costs of Recreation and Fish and Wildlife*

Enhancement (R&FWE). This report is no longer mandated by the Legislature, and those capital costs, starting with FY 2000–2001, are reported in this bulletin.

The approach to financing recreation and fish and wildlife enhancement in connection with the SWP is provided in the DDA (California Water Code (CWC) Sections 11900–11925, 1961), the Burns-Porter Act (CWC Section 12937, 1959), and CWC Sections as early as 1953 (233, 345, 346, 12581, and 12582), which declare recreation at the SWP to be a benefit to all the people of California and a cost that is to be borne by them. While this intent is cited in the DDA, no specific appropriation or funding source was defined. Consequently, Assembly Bill (AB) 12 in 1966, Senate Bill (SB) 1268 in 1970, and the Environmental Water Act, AB 1441 and AB 1442 in 1989, were all enacted to provide the statutorily required State funding for this SWP purpose.

As noted above, the Legislature has appropriated monies to meet State obligations to fund fish and wildlife enhancements and recreation at the SWP intermittently in the past. AB 12 appropriated \$5 million per year to DWR from tidelands oil and gas revenues, which totaled \$90 million through the early 1980s when these revenues were exhausted, and SB 1268 appropriated \$55 million to California State Parks and \$5 million to DFW specifically for their responsibilities under the DDA at SWP facilities. Finally, AB 1442 appropriated \$172 million to reimburse DWR for SWP R&FWE costs incurred over the roughly previous dozen years as an offset to DWR's outstanding California Water Fund repayment, and an additional \$30 million for SWP R&FWE through 1994.

While no other appropriations to DWR for SWP R&FWE have been made by the Legislature, DWR has used its authority under the Burns-Porter Act to carry out and fund all SWP project purposes, including

R&FWE, with State Water Resources Development System revenues.

Capital Cost Allocations

Table 13-3 shows capital costs allocated to R&FWE and overall costs of lands acquired for recreation development through 2009. Total capital costs increased by \$3,417,250 since Bulletin 132-09 due to an increase of \$3,423,267 in 2009 and a downward adjustment (\$6,017) in years prior to 2009 due to historical adjustments. The increase in 2009 included \$1,544,169 in joint costs, and \$1,742,182 in specific costs. These costs are budgeted by DWR from funds available for financing project construction costs. Recreation and enhancement costs not reported in this table are budgeted by several State departments and are financed by appropriations from a variety of funds.

Accrued Interest Charges

Table 13-4 details accrued interest charges included in the costs shown in Table 13-3 and reimbursements through December 2009. These interest accruals were calculated through October 2001 on the portion of annual disbursements financed by the California Water Resources Development Bond Fund, based on the weighted average interest costs of Burns-Porter and Water System Revenue Bonds sold to date, and are reported here for historical reference. The reimbursements were included in DWR's budget as appropriations from the General Fund and are used by DWR to pay for operations, maintenance, power, and replacement costs associated with operating the SWP for R&FWE.

For a more detailed discussion of these legislative provisions, and DWR's procedures for reporting and tabulating recreation and enhancement costs, please see the last Appendix D (to Bulletins 132-98, 132-99, 132-00, and 132-01).

Table 13-3 Recreation and Enhancement Costs of the State Water Project (Dollars)

| Facility | Joint Costs Allocated to Recreation and Enhancement | | | | | | |
|--|---|------------------|--------------------|-------------------|--------------------|--------------------|-----------------------|
| | 1952-2008 Updated | 2009 | Subtotal | Interest | Total | 8132-09 Costs | Increase/ Decrease |
| Frenchman Dam and Lake (78.5%) | | | | | | | |
| California Water Resources Development Bond Fund | 102,997 | 0 | 102,997 | 2,097 | 105,094 | 105,094 | 0 |
| All Other Funds | 2,719,807 | 101 | 2,719,908 | 0 | 2,719,908 | 2,719,807 | 101 |
| Antelope Dam and Lake (100%) | | | | | | | |
| California Water Resources Development Bond Fund | 1,033,261 | 0 | 1,033,261 | 113,788 | 1,147,049 | 1,147,049 | 0 |
| All Other Funds | 4,625,718 | 0 | 4,625,718 | 0 | 4,625,718 | 4,625,718 | 0 |
| Grizzly Valley Dam and Lake Davis (99.0%) | | | | | | | |
| California Water Resources Development Bond Fund | 4,003,092 | 0 | 4,003,092 | 486,754 | 4,489,846 | 4,489,846 | 0 |
| All Other Funds | 4,618,885 | (26,981) | 4,591,904 | 0 | 4,591,904 | 4,618,885 | (26,981) |
| Other Feather River Projects ^a | | | | | | | |
| California Water Resources Development Bond Fund | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| All Other Funds | 746,140 | 29 | 746,169 | 0 | 746,169 | 746,140 | 29 |
| Delta Facilities | | | | | | | |
| California Water Resources Development Bond Fund | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| All Other Funds | 12,999,653 | 54,990 | 13,054,643 | 0 | 13,054,643 | 12,999,608 | 55,035 |
| San Luis Dam and Reservoir, O'Neill Forebay and Los Banos Reservoir (3.4%) | | | | | | | |
| California Water Resources Development Bond Fund | 988,910 | 0 | 988,910 | 169,085 | 1,157,995 | 1,157,995 | 0 |
| All Other Funds | 3,510,667 | 21,684 | 3,532,351 | 0 | 3,532,351 | 3,510,766 | 21,585 |
| California Aqueduct Delta to Dos Amigos P.P. (3.4%) | | | | | | | |
| California Water Resources Development Bond Fund | 4,467,667 | 0 | 4,467,667 | 897,406 | 5,365,073 | 5,365,073 | 0 |
| All Other Funds | 4,730,755 | 25,432 | 4,756,187 | 0 | 4,756,187 | 4,730,753 | 25,434 |
| Oroville Division (2.9%) | | | | | | | |
| California Water Resources Development Bond Fund | 5,725,216 | 0 | 5,725,216 | 1,790,491 | 7,515,707 | 7,515,707 | 0 |
| All Other Funds | 5,925,889 | 58,135 | 5,984,024 | 0 | 5,984,024 | 5,922,929 | 61,095 |
| Del Valle Dam and Lake del Valle (48.0%) | | | | | | | |
| California Water Resources Development Bond Fund | 10,546,762 | 0 | 10,546,762 | 6,813,560 | 17,360,322 | 17,360,322 | 0 |
| All Other Funds | 4,204,687 | 3,526 | 4,208,213 | 0 | 4,208,213 | 4,204,683 | 3,530 |
| California Aqueduct Dos Amigos P.P. to Termini (5.7%) | | | | | | | |
| California Water Resources Development Bond Fund | 48,382,162 | 0 | 48,382,162 | 75,353,773 | 123,735,935 | 123,735,935 | 0 |
| All Other Funds | 88,105,561 | 1,544,169 | 89,649,730 | 0 | 89,649,730 | 88,114,490 | 1,535,240 |
| Subtotal | 207,437,829 | 1,681,085 | 209,118,914 | 85,626,954 | 294,745,868 | 293,070,800 | 1,675,068 |
| Specific Costs of Acquiring Land for Recreation Development | | | | | | | |
| Frenchman Dam and Lake | 3,379 | 0 | 3,379 | 160 | 3,539 | 3,539 | 0 |
| California Water Resources Development Bond Fund | 49,950 | 0 | 49,950 | 0 | 49,950 | 49,950 | 0 |
| All Other Funds | | | | | | | |
| Grizzly Valley Dam and Lake Davis | 204,475 | 0 | 204,475 | 17,573 | 222,048 | 222,048 | 0 |
| California Water Resources Development Bond Fund | 554,246 | 0 | 554,246 | 0 | 554,246 | 554,246 | 0 |
| All Other Funds | | | | | | | |
| Abbey Bridge Dam and Reservoir | 9 | 0 | 9 | 0 | 9 | 9 | 0 |
| California Water Resources Development Bond Fund | 9,921 | 0 | 9,921 | 0 | 9,921 | 9,921 | 0 |
| All Other Funds | | | | | | | |
| Antelope Dam and Lake | 3,167 | 0 | 3,167 | 0 | 3,167 | 3,167 | 0 |
| California Water Resources Development Bond Fund | 201,137 | 0 | 201,137 | 0 | 201,137 | 201,137 | 0 |
| All Other Funds | | | | | | | |
| San Luis Dam and Reservoir, O'Neill Forebay, and Los Banos Reservoir | | | | | | | |
| California Water Resources Development Bond Fund | 395,284 | 0 | 395,284 | 33,467 | 428,751 | 428,751 | 0 |
| All Other Funds | 867,243 | 0 | 867,243 | 0 | 867,243 | 867,243 | 0 |
| California Aqueduct Delta to Dos Amigos P.P. | | | | | | | |
| California Water Resources Development Bond Fund | 422,681 | 0 | 422,681 | 158,456 | 581,137 | 581,137 | 0 |
| All Other Funds | (91,879) | 0 | (91,879) | 0 | (91,879) | (91,879) | 0 |
| Oroville Division | | | | | | | |
| California Water Resources Development Bond Fund | 7,809,509 | 0 | 7,809,509 | 3,673,041 | 11,482,550 | 11,482,550 | 0 |
| All Other Funds | 4,374,332 | 1,742,182 | 6,116,514 | 0 | 6,116,514 | 4,374,332 | 1,742,182 |
| Del Valle Dam and Lake del Valle | | | | | | | |
| California Water Resources Development Bond Fund | 519,425 | 0 | 519,425 | 448,292 | 967,717 | 967,717 | 0 |
| All Other Funds | (32,202) | 0 | (32,202) | 0 | (32,202) | (32,202) | 0 |
| California Aqueduct Dos Amigos P.P. to Termini | | | | | | | |
| California Water Resources Development Bond Fund | 478,971 | 0 | 478,971 | 915,217 | 1,394,188 | 1,394,188 | 0 |
| All Other Funds | 419,088 | 0 | 419,088 | 0 | 419,088 | 419,088 | 0 |
| Castaic Dam and Lake | | | | | | | |
| California Water Resources Development Bond Fund | 1,954,297 | 0 | 1,954,297 | 3,856,203 | 5,810,500 | 5,810,500 | 0 |
| All Other Funds | 951,352 | 0 | 951,352 | 0 | 951,352 | 951,352 | 0 |
| Cedar Springs Dam and Silverwood Lake | | | | | | | |
| California Water Resources Development Bond Fund | 424,966 | 0 | 424,966 | 817,173 | 1,242,139 | 1,242,139 | 0 |
| All Other Funds | 370,164 | 0 | 370,164 | 0 | 370,164 | 370,164 | 0 |
| Perris Dam and Lake Perris | | | | | | | |
| California Water Resources Development Bond Fund | 1,022,313 | 0 | 1,022,313 | 2,033,799 | 3,056,112 | 3,056,112 | 0 |
| All Other Funds | 4,939,976 | 0 | 4,939,976 | 0 | 4,939,976 | 4,939,976 | 0 |
| Subtotal | 25,851,804 | 1,742,182 | 27,593,986 | 11,953,381 | 39,547,367 | 37,805,185 | 1,742,182 |
| Total Recreation and Enhancement Costs | | | | | | | |
| California Water Resources Development Bond Fund | 88,488,543 | 0 | 88,488,543 | 97,580,335 | 186,068,878 | 186,068,878 | 0 |
| All Other Funds | 144,801,090 | 3,423,267 | 148,224,357 | 0 | 148,224,357 | 144,807,107 | 3,417,250 |
| Total | 233,289,633 | 3,423,267 | 236,712,900 | 97,580,335 | 334,293,235 | 330,875,985 | 3,417,250 |

^a Actual capitalized costs for facilities not yet constructed.

Table 13-4 Calculation of Interest Accruals on California Water Resources Development Bond Fund Disbursements (in Dollars at 4.608% per Annum)

| Facility | 1952–2008 | | | | | 2009 | | | | | 2010 Beginning of Year Balance to be Reimbursed | | | | |
|--|-------------------|--------------------|--------------------|-------------------|-------------------------------|----------------|------------------|----------------|-----------------|-------------------------------|---|--------------------|--------------------|-------------------|-------------------------------|
| | Disbursements | | Reimbursements | | | Disbursements | | Reimbursements | | | Disbursements | | Reimbursements | | |
| | WRD Bond Funds | All Other Funds | WRD Bond Funds | All Other Funds | Interest Accrual ^a | WRD Bond Funds | All Other Funds | WRD Bond Funds | All Other Funds | Interest Accrual ^a | WRD Bond Funds | All Other Funds | WRD Bond Funds | All Other Funds | Interest Accrual ^a |
| Frenchman Dam and Lake | 102,997 | 2,719,807 | 104,900 | 2,719,468 | 2,097 | 0 | 101 | 0 | 0 | 0 | 102,997 | 2,719,908 | 104,900 | 2,719,468 | 2,097 |
| Antelope Dam and Lake | 1,033,261 | 4,625,718 | 1,140,322 | 4,478,932 | 113,788 | 0 | 0 | 0 | 0 | 0 | 1,033,261 | 4,625,718 | 1,140,322 | 4,478,932 | 113,788 |
| Grizzly Valley Dam and Lake Davis | 4,003,092 | 4,618,885 | 4,444,594 | 2,568,667 | 486,754 | 0 | (26,981) | 0 | 0 | 0 | 4,003,092 | 4,591,904 | 4,444,594 | 2,568,667 | 486,754 |
| Oroville Division | 5,725,216 | 5,925,889 | 7,324,529 | 4,570,269 | 1,790,491 | 0 | 58,135 | 0 | 0 | 0 | 5,725,216 | 5,984,024 | 7,324,529 | 4,570,269 | 1,790,491 |
| Other Feather River Projects | 0 | 746,140 | 0 | 0 | 0 | 0 | 29 | 0 | 0 | 0 | 0 | 746,169 | 0 | 0 | 0 |
| Delta Facilities | 0 | 12,999,653 | 0 | 0 | 0 | 0 | 54,990 | 0 | 0 | 0 | 0 | 13,054,643 | 0 | 0 | 0 |
| Del Valle Dam and Lake del Valle | 10,546,762 | 4,204,687 | 16,463,934 | 3,130,016 | 6,813,560 | 0 | 3,526 | 0 | 0 | 0 | 10,546,762 | 4,208,213 | 16,463,934 | 3,130,016 | 6,813,560 |
| California Aqueduct Delta to Dos Amigos PP. | 4,467,667 | 4,730,755 | 5,267,351 | 4,092,435 | 897,406 | 0 | 25,432 | 0 | 0 | 0 | 4,467,667 | 4,756,187 | 5,267,351 | 4,092,435 | 897,406 |
| Sisk Dam, San Luis Reservoir, O'Neill Forebay, and Los Banos Reservoir | 988,910 | 3,510,667 | 1,938,244 | 2,725,578 | 169,085 | 0 | 21,684 | 0 | 0 | 0 | 988,910 | 3,532,351 | 1,938,244 | 2,725,578 | 169,085 |
| California Aqueduct Dos Amigos PP. to Termini | 48,382,162 | 88,105,561 | 113,035,518 | 49,410,851 | 75,353,773 | 0 | 1,544,169 | 0 | 0 | 0 | 48,382,162 | 89,649,730 | 113,035,518 | 49,410,851 | 75,353,773 |
| Subtotal | 75,250,067 | 132,187,762 | 149,719,392 | 73,696,216 | 85,626,954 | 0 | 1,681,085 | 0 | 0 | 0 | 71,246,975 | 133,868,847 | 149,719,392 | 73,696,216 | 85,626,954 |
| Specific Costs of Acquiring Land for Recreation Development | | | | | | | | | | | | | | | |
| Frenchman Dam and Lake | 3,379 | 49,950 | 3,520 | 49,947 | 160 | 0 | 0 | 0 | 0 | 0 | 3,379 | 49,950 | 3,520 | 49,947 | 160 |
| Grizzly Valley Dam and Lake Davis | 204,475 | 554,246 | 220,423 | 554,244 | 17,573 | 0 | 0 | 0 | 0 | 0 | 204,475 | 554,246 | 220,423 | 554,244 | 17,573 |
| Abbey Bridge Dam and Reservoir | 9 | 9,921 | 9 | 9,921 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 9,921 | 9 | 9,921 | 0 |
| Antelope Dam and Lake | 3,167 | 201,137 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3,167 | 201,137 | 0 | 0 | 0 |
| Oroville Division | 7,809,509 | 4,374,332 | 11,028,039 | 649,733 | 3,673,041 | 0 | 1,742,182 | 0 | 0 | 0 | 7,809,509 | 6,116,514 | 11,028,039 | 649,733 | 3,673,041 |
| Del Valle Dam and Lake del Valle | 519,425 | (32,202) | 917,078 | (32,200) | 448,292 | 0 | 0 | 0 | 0 | 0 | 519,425 | (32,202) | 917,078 | (32,200) | 448,292 |
| Sisk Dam, San Luis Reservoir, O'Neill Forebay, and Los Banos Reservoir | 395,284 | 867,243 | 425,700 | 415,610 | 33,467 | 0 | 0 | 0 | 0 | 0 | 395,284 | 867,243 | 425,700 | 415,610 | 33,467 |
| California Aqueduct Delta to Dos Amigos PP. | 422,681 | (91,879) | 603,887 | (137,494) | 158,456 | 0 | 0 | 0 | 0 | 0 | 422,681 | (91,879) | 603,887 | (137,494) | 158,456 |
| California Aqueduct Dos Amigos PP. to Termini | 478,971 | 419,088 | 1,271,912 | 398,349 | 915,217 | 0 | 0 | 0 | 0 | 0 | 478,971 | 419,088 | 1,271,912 | 398,349 | 915,217 |
| Castaic Dam and Lake | 1,954,297 | 951,352 | 5,291,258 | 951,070 | 3,856,203 | 0 | 0 | 0 | 0 | 0 | 1,954,297 | 951,352 | 5,291,258 | 951,070 | 3,856,203 |
| Cedar Springs Dam and Silverwood Lake | 424,966 | 370,164 | 1,132,207 | 370,137 | 817,173 | 0 | 0 | 0 | 0 | 0 | 424,966 | 370,164 | 1,132,207 | 370,137 | 817,173 |
| Perris Dam and Lake Perris | 1,022,313 | 4,939,976 | 2,780,487 | 4,867,247 | 2,033,799 | 0 | 0 | 0 | 0 | 0 | 1,022,313 | 4,939,976 | 2,780,487 | 4,867,247 | 2,033,799 |
| Subtotal | 13,238,476 | 12,613,328 | 23,674,520 | 8,096,564 | 11,953,381 | 0 | 1,742,182 | 0 | 0 | 0 | 13,238,476 | 14,355,510 | 23,674,520 | 8,096,564 | 11,953,381 |
| Total | 88,488,543 | 144,801,090 | 173,393,912 | 81,792,780 | 97,580,335 | 0 | 3,423,267 | 0 | 0 | 0 | 84,485,451 | 148,224,357 | 173,393,912 | 81,792,780 | 97,580,335 |

^a Accrued interest not calculated since October 2001 when SB 1191 amended CWC Section 11912 so that DWR was no longer required to report these costs annually to the Legislature or to submit cost allocations to the State Departments of Boating and Waterways, Parks and Recreation, and Fish and Game.



Chapter 14

Financial Analysis

San Luis Reservoir.

Significant Events in 2009

On March 19, the Department of Water Resources (DWR) delivered \$287.735 million of Water System Revenue Bonds, Series AF. The proceeds were presold on March 18 to refinance commercial paper and previously issued bonds, finance long-term construction expenditures, and pay bond financing costs.

On December 2, DWR delivered \$169.115 million of Water System Revenue Bonds, Series AG. The proceeds were presold on December 1 to refinance commercial paper and previously issued bonds, finance long-term construction expenditures, and pay bond financing costs.

Information for this chapter was provided by the State Water Project Analysis Office in conjunction with the Division of Fiscal Services.

This chapter presents both a summary and a detailed explanation of the State Water Project's (SWP) current financial analysis, capital costs and requirements, revenues and expenses, and bond activities for years 2009 through 2020.

The Department of Water Resources (DWR) performs a financial analysis annually to ensure the SWP financing program will have sufficient funds to meet construction obligations; project operation, maintenance, power, and replacement costs; and debt service payments for bonds expended for construction. The results of the current financial analysis, dated December 31, 2009, are presented in Tables 14-1 and 14-2, located at the end of this chapter.

Future contingencies may change the financial analysis, some of which include:

- alterations in schedules of currently planned construction for future facilities;
- changes in economic conditions, including changes in interest rates and in SWP water contractor Table A amounts due to changes in amounts of water needed, conserved, or reclaimed;
- development of additional sources of water not foreseen at this time;
- deviations from the assumptions regarding actual rates of price escalations for future construction from those currently assumed for cost estimates;
- increases in capital costs related to additional conservation facilities; and
- outcome of lawsuits now pending before the courts.

Capital Requirements and Financing

In conducting the current financial analysis, DWR projected future construction costs through the year 2020 plus reimbursement

of \$99 million interim financing for prior expenditures will total \$1.87 billion. Special capital requirements for revenue bond financing of these construction costs are projected at \$191 million for a total capital requirement of \$2.06 billion. This projection includes construction and financing costs for the following significant SWP projects planned for completion by 2020:

- Perris Dam Remediation;
- Phase II enlargement of the East Branch of the California Aqueduct;
- Phase I improvements to the East Branch Extension;
- Phase II of the East Branch Extension;
- enlargement of and improvement to the South Bay Aqueduct (SBA); and
- a new intake to the North Bay Aqueduct.

Most of these capital requirements will be financed from the projected sale of \$2.01 billion of revenue bonds. The remaining \$50 million will be financed from capital resources revenues and the transfer of excess revenues not needed for operation costs or debt service.

The analysis of capital requirements and financing presented in Table 14-1 does not include the costs and financing of all facilities needed to develop the remaining yield necessary to meet the total 4.2 million af contractual commitment to long-term SWP water contractors. Table 14-1 also does not include the costs of associated work essential for realizing full benefits from the SWP, but financed and constructed by local interests or State agencies other than DWR.

Those facilities include on-shore recreational developments at SWP facilities and local distribution facilities.

The allocation of capital expenditures for various SWP purposes is detailed in Table 14-3.

Capital Requirements

Lines 1 through 20 in Table 14-1 show actual and projected SWP capital requirements through 2020. Estimates of future capital expenditures include allowances for construction cost escalation of 5 percent per year from 2010 through 2020. Right-of-way costs are escalated at 4 percent per year from 2010 through 2020. Capital expenditures for the SWP also include requirements other than those for construction, such as disbursements made as part of the Davis-Grunsky Act Program (Line 16) and special capital requirements under revenue bond financing (Line 17). DWR will decide whether to construct facilities only after examining alternatives and completing environmental documentation and other review processes.

Line 1, Initial Project Facilities, includes only those facilities completed in the initial construction program, which concluded December 31, 1973 (see Bulletin 132-74, Chapter 2). Additional costs after 1973, and estimated costs of remaining work on the initial SWP facilities, are not included.

Line 2, North Bay Aqueduct, consists of the estimated costs for improvements and the historical costs for Phase II. Phase II, which became operational in May 1988, connected with the Phase I facilities, which were completed in 1968 (Phase I costs are included in the initial project facilities discussed in Line 1). Phase II included costs for pipelines, pumping plants, and a small reservoir necessary to divert water from the western Delta to Napa and Solano counties for urban use. The improvements consist of replacing the existing tank with two

5-million gallon tanks. Construction began in 2007 and is expected to be completed in 2010.

Line 3, Delta and Suisun Marsh Facilities, shows historical costs that include planning for general Delta facilities and the previously planned peripheral canal and overland water delivery facilities for the western Delta. Also included are historical planning costs for Suisun Marsh as well as construction costs for the Suisun Marsh Salinity Control Gates and an access road. The projected amounts include projected planning costs plus projected costs for fish screens at Sherman and Twitchell islands.

Line 4, Final Four Units at Banks Pumping Plant, includes costs of the final four 1,067 cubic feet per second (cfs) units, which became operational in spring 1992.

Line 5, Coastal Branch Aqueduct, includes all costs for the planning, design, and construction of Phase II of the Coastal Branch of the California Aqueduct. Phase II construction began in October 1993 and was completed in 1997. Water deliveries from Phase II facilities began in July 1997.

Line 6, West Branch Aqueduct, shows costs for all facilities on the West Branch except Warne Powerplant. Those costs are included in Line 11.

Line 7, East Branch Enlargement, includes expenditures for Phases I and II of the East Branch Enlargement. Phase I included the enlargement share of power plant costs at Mojave Siphon and Devil Canyon. (The remaining power plant costs are included in Line 11.) East Branch Enlargement costs for Phase I, by facility, are presented in Table 14-4. Costs for Alamo Powerplant consist of expenditures for Unit 1 facilities allocated to enlargement. Construction of Unit 2 was deferred.

Table 14-3 Allocation of Capital Expenditures (Thousands of Dollars)

| Facilities and Construction Divisions | Expenditures Incurred Through 2009 | Future Expenditures | Total | Preliminary Allocation Among Project Purposes | | | |
|--|------------------------------------|---------------------|-----------|---|----------------------------|--|--------------------|
| | | | | Water Supply and Power Generation | Flood Control ^a | Recreation and Fish and Wildlife Enhancement | Other ^b |
| Project Construction Expenditures | | | | | | | |
| Upper Feather Division | 20,391 | 2 | 20,393 | 1,544 | 0 | 18,849 | 0 |
| Oroville Division (excludes Small Hydro) | 635,525 | 60,886 | 696,410 | 598,891 | 71,874 | 25,646 | 0 |
| Delta Facilities Division | 414,549 | 23,947 | 438,496 | 423,923 | 0 | 14,573 | 0 |
| North Bay Aqueduct | 107,950 | 397,986 | 505,936 | 505,936 | 0 | 0 | 0 |
| South Bay Aqueduct | 266,873 | 55,913 | 322,786 | 299,345 | 8198 | 15,242 | 0 |
| California Aqueduct | | | | | | | |
| North San Joaquin Division | 276,022 | 20,232 | 296,254 | 286,019 | 0 | 10,235 | 0 |
| San Luis Division | 272,424 | 8,806 | 281,230 | 268,472 | 0 | 12,758 | 0 |
| South San Joaquin Division | 317,244 | 11,779 | 329,023 | 311,113 | 0 | 17,910 | 0 |
| Tehachapi Division | 351,762 | 22,361 | 374,123 | 353,141 | 0 | 20,981 | 0 |
| Mojave Division (excludes Small Hydro) | 339,720 | 24,776 | 364,496 | 324,439 | 0 | 40,057 | 0 |
| Santa Ana Division | 285,249 | 271,998 | 557,248 | 508,355 | 0 | 48,892 | 0 |
| West Branch | 556,167 | 82,788 | 638,955 | 602,025 | 0 | 36,930 | 0 |
| Coastal Branch | 490,681 | 10,347 | 501,029 | 501,029 | 0 | 0 | 0 |
| Subtotal, California Aqueduct | 2,889,269 | 453,087 | 3,342,356 | 3,154,592 | 0 | 187,764 | 0 |
| Other Project Facilities | | | | | | | |
| Small Hydroelectric Power | | | | | | | |
| Generating Facilities | 99,751 | 0 | 99,751 | 99,751 | 0 | 0 | 0 |
| Off-Aqueduct Power | | | | | | | |
| Generating Facilities | 486,791 | 9,300 | 496,091 | 496,091 | 0 | 0 | 0 |
| East Branch Enlargement | 459,877 | 435,740 | 895,617 | 895,617 | 0 | 0 | 0 |
| East Branch Extension | 147,877 | 213,638 | 361,515 | 361,515 | 0 | 0 | 0 |
| Coastal Power Allocation | 30,708 | 0 | 30,708 | 30,708 | 0 | 0 | 0 |
| Agricultural Drainage Facilities | 76,566 | 17,190 | 93,756 | 0 | 0 | 0 | 93,756 |
| Planning and Preoperations | 70,632 | 46,123 | 116,755 | 116,755 | 0 | 0 | 0 |
| Unassigned/Miscellaneous | 82,840 | 52,670 | 135,510 | 0 | 0 | 0 | 135,510 |
| Subtotal, Project Construction | | | | | | | |
| Expenditures | 5,789,599 | 1,766,483 | 7,556,081 | 6,984,669 | 80,072 | 262,075 | 229,266 |
| Other Capital Requirements | | | | | | | |
| Davis-Grunsky Act Program | 130,000 | 0 | 130,000 | 0 | 0 | 0 | 130,000 |
| Total Capital Expenditures | 5,919,599 | 1,766,483 | 7,686,081 | 6,984,669 | 80,072 | 262,075 | 359,266 |

^aReflects DWR's allocation to this purpose, irrespective of federal payments.

^bIncludes costs currently unassigned to purpose, planning costs of deleted features of project facilities, initial costs of inventoried items, and costs assigned to the Davis-Grunsky Act Program.

Work on the environmental impact report, mapping, and preliminary design for Phase II of the enlargement began in March 2007. Construction is projected to be completed in 2017. Project costs include raising the canal embankment and concrete lining, constructing additional siphon barrels, adding bays to check structures, constructing Unit 2 at Alamo Powerplant, and adding two pump/motor units and a discharge line at Pearblossom Pumping Plant.

All costs in Line 7 are allocated to and repaid by the seven Southern California contractors participating in the East Branch Enlargement.

Line 8, East Branch Improvements, shows all aqueduct costs on the East Branch not allocated to the enlargement project. Those costs include improvements constructed concurrently with the enlargement work, the reconstruction of the San Bernardino Tunnel Intake, and the construction of the Tehachapi East Afterbay. Costs for power plant construction at Alamo, Mojave Siphon, and Devil Canyon are not included in this line.

Line 9, East Branch Extension, shows expenditures for Phases I and II of the extension of the East Branch of the California Aqueduct. The East Branch Extension extends the California Aqueduct east from the Devil Canyon Powerplant to a terminus at Noble Creek near Beaumont in Riverside County. The extension provides water service to the San Geronio Pass Water Agency and the San Bernardino Valley Municipal Water District. Construction of Phase I began in February 1999 and was completed in 2003. Phase I improvements include enlargement of the Crafton Hills Reservoir and construction of the Yucaipa Connector Pipeline. Construction of this phase is to be completed by mid-2012. Phase II will increase the pumping capacity to 100 percent of design capacity. Construction of Phase II is anticipated to begin in 2012. All costs in Line 9 will be allocated to and repaid by the two participating contractors.

Line 10, South Bay Aqueduct Improvements and Enlargement, shows expenditures for providing additional capacity required to meet increases in water demands for the service area of Alameda County Flood Control and Water Conservation District, Zone 7, and increasing the existing capacity of the SBA to its original design capacity. Construction began in 2006 and is scheduled to be completed in 2012.

Line 11, Power Generation and Transmission Facilities, does not include the East Branch Enlargement share of costs for Alamo, Mojave Siphon, and Devil Canyon powerplants shown in Line 7 of Table 14-1. The capital costs for facilities included in Line 11 are shown in Table 14-5.

Line 12, Additional Conservation Facilities, shows projected costs to plan and study additional conservation facilities. Specific planning activities and projected spending amounts for 2010 through 2020 are shown in Table 14-6. Expenditures for these items are being reviewed. Construction costs of additional conservation facilities are not included in the financial analysis.

Line 12 does not include the Bay Delta Conservation Plan costs. DWR's share of the Bay Delta Conservation Plan expenditures for preliminary planning and environmental impact report preparation are currently financed by participating contractors.

Line 13, Agricultural Drainage Facilities, includes projected costs of the Agricultural Drainage Program. The activities in this program are monitoring, evaluating, reducing, and treating drainage, as well as investigating treatment and reuse of drainage water.

DWR assumes that future costs of the drainage program will be financed by revenue transfers (Line 36).

Table 14-4 East Branch Enlargement Capital Costs by Facility

| Facility | Amount (Millions of Dollars) |
|---|---------------------------------|
| Aqueduct and Siphons | 128.1 |
| Pearblossom Pumping Plant | 70.1 |
| Alamo Powerplant | 5.0 |
| Mojave Siphon Powerplant | 47.3 |
| Devil Canyon Powerplant and Second Afterbay | 202.9 |
| Total | 453.4 |

Table 14-5 Estimated Capital Costs for Power Generation and Transmission Facilities

| Facility | Amount (Millions of Dollars) |
|---------------------------|---------------------------------|
| Power Plants | |
| Reid Gardner, Unit 4 | 318.7 |
| Bottle Rock | 120.9 |
| South Geysers | 49.6 |
| Devil Canyon | 36.8 |
| Warne | 84.5 |
| Alamo | 44.9 |
| Mojave Siphon | 40.8 |
| Thermalito Diversion Dam | 14.1 |
| <i>Subtotal</i> | <i>710.2</i> |
| Transmission Lines | |
| Midway–Wheeler Ridge | 10.7 |
| Geysers–Lakeville | 6.9 |
| <i>Subtotal</i> | <i>17.6</i> |
| Total | 727.8 |

Table 14-6 Estimated Future Costs for Planning Additional Conservation Facilities

| Activity | Amount (Millions of Dollars) |
|-------------------------|---------------------------------|
| SWP Future Water Supply | 38.1 |
| Other Planning Costs | 8.0 |
| Total | 46.1 |

Line 14, Other Costs, includes items such as general design and construction costs, costs of completing operation and maintenance facilities, and costs of other completion activities for the initial facilities of the California Aqueduct. Portions of those costs ultimately will be allocated to California Aqueduct units described in the preceding paragraphs.

Line 15, Subtotal Project Construction Expenditures, is the total of Lines 1 through 14.

Line 16, Davis-Grunsky Act Program Costs, shows costs of the Davis-Grunsky Act Program, a financial assistance program to provide grants and loans to public agencies for constructing local water projects.

As of December 31, 2009, DWR had disbursed \$130 million (including \$8.5 million for administration) in grants and loans to local agencies throughout the State.

Line 17, Special Capital Requirements Under Revenue Bond Financing, presents special capital requirements at the time revenue bonds are sold. The financial analysis assumes that proceeds from any future revenue bonds will be used to pay for bond discounts, bond issuance costs, and debt service reserve requirements.

Information about the application of proceeds to these special requirements for actual and assumed revenue bond sales is presented in Table 14-7.

Line 18, Total Capital Requirements, is the total of Lines 15, 16, and 17.

Line 19, Power Facilities Capital Requirements, shows the total capital requirements for power facilities included in Line 18.

Line 20, Water Facilities Capital Requirements, shows the total capital requirements for water facilities included in Line 18.

Capital Financing

The SWP was constructed using three general types of financing: Burns-Porter Act, revenue bonds, and capital resources. Lines 21 through 37 of Table 14-1 present specific information about these financing sources.

Burns-Porter Act

Burns-Porter Act financing is derived from the sale of California Water Resources Development Bonds (general obligation bonds) and State tideland oil revenues deposited in the California Water Fund as authorized by the Burns-Porter Act (California Water Code Sections 12930–12944), approved by voters in November 1960. The Burns-Porter Act authorized an issuance of \$1.75 billion of general obligation State bonds, which are repaid by revenues received according to the water supply contracts. Of that authorization, \$130 million was reserved specifically for the Davis-Grunsky Act Program.

Proceeds from the sale of general obligation bonds were deposited in the California Water Resources Development Bond Fund—Bond Proceeds Account, from which monies were expended only for the construction of SWP facilities and for the Davis-Grunsky Act Program. Approximately 27 percent of the expenditures through 2009 for construction and the Davis-Grunsky Act Program were financed with general obligation bonds.

Monies deposited in the California Water Fund were appropriated for purposes outlined in the Burns-Porter Act. Such deposits were derived from a portion of the State tideland oil revenues, in accordance with a continuing authorization. The California Water Fund was used to finance \$508 million, or approximately 8 percent, of the construction expenditures through 2009.

Table 14-7 Application of Revenue Bond Proceeds (Millions of Dollars)

| Bond Series ^a | Construction Expenditures | Other Capital Requirements | | | | | Total Principal Amount of Bonds |
|--------------------------------------|---------------------------|-------------------------------|----------------------|-----------------------------|---|----------------|---------------------------------|
| | | Reimbursement of General Fund | Capitalized Interest | Capitalized Operating Costs | Bond Financing and Refunding Costs ^b | Subtotal | |
| Oroville | 218.0 | 2.6 | 19.9 | 1.5 | 3.0 | 27.0 | 245.0 |
| Devil Canyon-Castaic | 126.4 | 0.0 | 10.0 | 0.7 | 2.1 | 12.8 | 139.2 |
| Pyramid Series A | 74.0 | 0.0 | 19.2 | 1.0 | 1.6 | 21.8 | 95.8 |
| Reid Gardner Series B | 146.1 | 0.0 | 41.9 | 0.0 | 12.0 | 53.9 | 200.0 |
| Reid Gardner Series C | 91.1 | 0.0 | 17.9 | 7.9 | 8.1 | 33.9 | 125.0 |
| Small Hydro-South Geysers Series D | 49.6 | 0.0 | 19.9 | 0.0 | 5.5 | 25.4 | 75.0 |
| Bottle Rock Series E | 96.9 | 0.0 | 22.0 | 3.7 | 2.4 | 28.1 | 125.0 |
| Alamo-South Geysers Series F | 59.1 | 0.0 | 14.2 | 0.0 | 1.7 | 15.9 | 75.0 |
| Reid Gardner Series G | 1.6 | 0.0 | 0.0 | 0.0 | 237.9 | 237.9 | 239.5 |
| Power Facilities Series H | 22.2 | 0.0 | 0.0 | 0.0 | 184.5 | 184.5 | 206.7 |
| East Branch Enlargement Series A | 108.3 | 0.0 | 12.6 | 0.0 | 11.1 | 23.7 | 132.0 |
| Water System Facilities Series B | 97.4 | 0.0 | 0.0 | 0.0 | 2.6 | 2.6 | 100.0 |
| Water System Facilities Series C | 0.6 | 0.0 | 0.0 | 0.0 | 8.4 | 8.4 | 9.0 |
| Water System Facilities Series D | 95.9 | 0.0 | 2.9 | 0.0 | 1.2 | 4.1 | 100.0 |
| Water System Facilities Series E | 0.4 | 0.0 | 0.0 | 0.0 | 8.6 | 8.6 | 9.0 |
| Water System Facilities Series F | 0.0 | 0.0 | 0.0 | 0.0 | 160.0 | 160.0 | 160.0 |
| Water System Facilities Series G | 86.8 | 0.0 | 4.6 | 0.0 | 8.6 | 13.2 | 100.0 |
| Water System Facilities Series H | 85.5 | 0.0 | 5.7 | 0.0 | 8.8 | 14.5 | 100.0 |
| Water System Facilities Series I | 158.9 | 0.0 | 5.8 | 0.0 | 15.3 | 21.1 | 180.0 |
| Water System Facilities Series J | 0.0 | 0.0 | 0.0 | 0.0 | 649.8 | 649.8 | 649.8 |
| Water System Facilities Series K | 88.6 | 0.0 | 3.1 | 0.0 | 8.3 | 11.4 | 100.0 |
| Water System Facilities Series L | 0.0 | 0.0 | 0.0 | 0.0 | 537.8 | 537.8 | 537.8 |
| Water System Facilities Series M | 166.3 | 0.0 | 9.9 | 0.0 | 13.8 | 23.7 | 190.0 |
| Water System Facilities Series N | 137.4 | 0.0 | 6.0 | 0.0 | 8.6 | 14.6 | 152.0 |
| Water System Facilities Series O | 156.5 | 0.0 | 8.4 | 0.0 | 170.1 | 178.5 | 335.0 |
| Water System Facilities Series P | 141.6 | 0.0 | 5.2 | 0.0 | 13.2 | 18.4 | 160.0 |
| Water System Facilities Series Q | 135.0 | 0.0 | 8.0 | 0.0 | 123.6 | 131.6 | 266.6 |
| Water System Facilities Series R | 0.0 | 0.0 | 0.0 | 0.0 | 20.7 | 20.7 | 20.7 |
| Water System Facilities Series S | 78.2 | 0.0 | 5.8 | 0.0 | 116.2 | 122.0 | 200.2 |
| Water System Facilities Series T | 0.0 | 0.0 | 0.0 | 0.0 | 135.7 | 135.7 | 135.7 |
| Water System Facilities Series U | 98.7 | 0.0 | 5.3 | 0.0 | 103.2 | 108.5 | 207.2 |
| Water System Facilities Series V | 0.0 | 0.0 | 0.0 | 0.0 | 20.6 | 20.6 | 20.6 |
| Water System Facilities Series W | 41.0 | 0.0 | 1.3 | 0.0 | 218.7 | 220.0 | 261.0 |
| Water System Facilities Series X | 0.0 | 0.0 | 0.0 | 0.0 | 160.2 | 160.2 | 160.2 |
| Water System Facilities Series Y | 0.0 | 0.0 | 0.0 | 0.0 | 329.9 | 329.9 | 329.9 |
| Water System Facilities Series Z | 0.0 | 0.0 | 0.0 | 0.0 | 170.7 | 170.7 | 170.7 |
| Water System Facilities Series AA | 0.0 | 0.0 | 0.0 | 0.0 | 108.7 | 108.7 | 108.7 |
| Water System Facilities Series AB | 92.2 | 0.0 | 3.9 | 0.0 | 93.6 | 97.5 | 189.7 |
| Water System Facilities Series AC | 13.7 | 0.0 | 0.6 | 0.0 | 257.7 | 258.3 | 272.0 |
| Water System Facilities Series AD | 12.4 | 0.0 | 0.9 | 0.0 | 99.1 | 100.0 | 112.4 |
| Water System Facilities Series AE | 383.9 | 0.0 | 9.5 | 0.0 | 239.5 | 249.0 | 632.9 |
| Water System Facilities Series AF | 33.4 | 0.0 | 1.3 | 0.0 | 253.1 | 254.4 | 287.7 |
| Water System Facilities Series AG | 9.9 | 0.0 | 0.4 | 0.0 | 158.8 | 159.2 | 169.1 |
| <i>Subtotal</i> | <i>3,107.6</i> | <i>2.6</i> | <i>266.2</i> | <i>14.8</i> | <i>4,695.0</i> | <i>4,978.6</i> | <i>8,086.2^c</i> |
| Future East Branch Enlargement Bonds | 442.2 | 0.0 | 20.4 | 0.0 | 26.0 | 46.4 | 488.59 |
| Future East Branch Extension Bonds | 193.0 | 0.0 | 8.9 | 0.0 | 11.3 | 20.3 | 213.3 |
| Future SBA Enlargement Bonds | 35.2 | 0.0 | 1.6 | 0.0 | 2.1 | 3.7 | 38.9 |
| Future Water System Facilities Bonds | 1,145.4 | 0.0 | 52.9 | 0.0 | 67.3 | 120.1 | 1,265.5 |
| Total | 4,923.3 | 2.6 | 350.0 | 14.8 | 4,801.7 | 5,169.1 | 10,092.4 |

^a Actual bond issue for all except future East Branch Enlargement, future East Branch Extension, future SBA Improvements and Enlargement, and future Water System Facilities bonds.

^b Bond financing and refunding costs include funds applied to debt service reserve requirements.

^c Includes \$3,824.9 million of refunded principal, leaving a net principal obligation of \$4,261.3 million.

Revenue Bonds

Revenue bond financing is derived from the sale of revenue bonds as authorized by the Central Valley Project Act (California Water Code Sections 11100–11925). DWR's authority to issue revenue bonds was confirmed by a decision of the California Supreme Court in 1963 (*Warne v. Harkness*, 60 Cal. 2d 579).

Proceeds from the sale of revenue bonds are deposited in the Central Valley Water Project Construction Fund, from which money is expended only for purposes specified in the resolution authorizing each bond sale. Those purposes, in addition to paying construction, planning, and right-of-way costs, may include funding the Debt Service Reserve Account, paying interest on bonds, and paying water system operating expenses during a specified period.

As of December 31, 2009, DWR had sold \$8.1 billion of revenue bonds. That amount includes \$3.8 billion of refunded bonds, leaving a total principal obligation of \$4.3 billion.

Capital Resources

Capital resources financing is derived from payments and appropriations (including a portion of the State tideland oil revenues) authorized by a variety of special contracts, cost-sharing agreements, and legislative actions concerning the SWP, plus accrued interest on these funds. Capital resources revenues are deposited in the Central Valley Water Project Construction Fund and may be expended for interest on general obligation bonds and costs of constructing SWP facilities.

According to DWR's financial management policy, the capital resources revenues are used first to cover any general obligation bond debt service that exceeds available revenues.

Capital Financing Sources

Capital financing sources include power revenue bonds, East Branch Enlargement bonds, East Branch Extension bonds, SBA Enlargement bonds, water system facilities bonds, initial project facilities bonds, bond proceeds from the Davis-Grunsky Act Program, California Water Fund monies, and capital resources revenues.

Line 21, Power Facilities Revenue Bonds through Series H, includes the proceeds applied from power revenue bonds for Oroville, Devil Canyon, Castaic, Warne, Reid Gardner, Bottle Rock, Alamo, South Geysers, and small hydro projects.

No future power revenue bond sales are projected for this financial analysis.

Line 22, East Branch Enlargement, Current Bonds, shows that \$474 million of Water System Revenue Bond proceeds has been applied to the East Branch Enlargement project through December 31, 2009. Of this total, \$417 million was used for construction expenditures and \$57 million was used for bond discounts, interest costs, and debt service reserve requirements.

Line 23, East Branch Enlargement, Future Bonds, shows DWR's estimate of \$489 million of bonds required to complete construction of the East Branch Enlargement Phase II.

Line 24, East Branch Extension, Current Bonds, shows that \$184 million of Water System Revenue Bond proceeds has been spent through December 31, 2009.

Line 25, East Branch Extension, Future Bonds, shows DWR's estimate of \$213 million of additional bonds required to complete construction of the East Branch Extension and to pay for bond discounts, capitalized interest, and debt service reserve requirements.

Line 26, South Bay Aqueduct Enlargement, Current Bonds, shows that \$131 million of Water System Revenue Bond proceeds had been spent through December 31, 2009.

Line 27, South Bay Aqueduct Enlargement, Future Bonds, shows DWR's estimate of \$39 million of bonds required to complete construction of the SBA Enlargement and to pay for bond discounts, capitalized interest, and debt service reserve requirements.

Line 28, Water System Facilities, Current Bonds, shows that through December 31, 2009, \$1.7 billion of proceeds from Water System Revenue Bonds, Series A through Series AG, was applied to SWP projects other than the East Branch Enlargement, the East Branch Extension, and the SBA Enlargement. Of this total, \$1.5 billion was used to pay for construction expenditures and \$0.2 billion was used to pay for bond discounts, capitalized interest, and debt service reserve requirements.

Line 29, Water System Facilities, Future Bonds, shows that \$1.27 billion of future water revenue bonds is needed to provide \$1.15 billion for construction of SWP water system facilities and \$120 million for bond discounts, interest costs, and debt service reserve requirements.

Line 30, Subtotal, Water System Revenue Bonds, is the total of Lines 22 through 29.

Line 31, Initial Project Facilities Bond Proceeds, shows the amount of general obligation bonds sold to provide financing costs for initial SWP facilities and for costs of planning certain additional conservation facilities.

Financing initial facilities from general obligation bonds was completed in mid-1972 and totaled \$1.444 billion—\$1.750 billion Burns-Porter Act authorization less \$130 million reserved for the Davis-Grunsky Act Program and \$176 million “offset” for

additional conservation facilities. (The Burns-Porter Act provides that to the extent California Water Fund monies are expended, an equal amount of general obligation bonds are reserved [offset] for financing the construction of additional conservation facilities in certain watersheds.)

In mid-1972, the reservation of offset bonds was effectively limited to \$176 million, the total amount of California Water Fund monies expended up to that time. By mid-1972, all general obligation bonds authorized by the Burns-Porter Act had been offset, reserved for the Davis-Grunsky Act Program, or used for SWP construction.

Approximately \$8.5 million of the offset bonds was used to finance planning studies of the Middle Fork Eel River Development. This financial analysis is not based on the use of any offset bond proceeds to meet capital requirements. If, at some time, the State constructs an additional conservation facility, as specified in California Water Code Section 12938, the remaining offset bonds could be sold.

Line 32, Davis-Grunsky Act Program Bond Proceeds, shows, for simplification, the entire \$130 million of capital expenditures authorized for the Davis-Grunsky Act Program, according to the Burns-Porter Act, as being funded by proceeds from the sale of general obligation bonds. In fact, \$102 million originated from bond proceeds while \$28 million from the California Water Fund was used for the program in lieu of bond proceeds prior to 1969. Since the final offset in 1994, DWR has accumulated \$44.6 million in capital costs through fiscal year 2006–2007.

Line 33, Application of California Water Fund Monies, shows the amount of SWP costs financed under the Burns-Porter Act. The act provides that any available money in the California Water Fund must be used for

construction in lieu of proceeds from the sale of general obligation bonds.

When the Burns-Porter Act became effective in late 1960, approximately \$97 million had been accumulated in the fund. That balance, plus subsequent appropriations, interest earnings, and other miscellaneous income to the fund through December 31, 2009, was used to finance a total of \$508 million of SWP costs.

Line 34, Interim Financing, shows the net annual amounts of funds flowing into and out of the Water Revenue Commercial Paper Notes program. This program was established in March 1993 to provide an ongoing source of interim financing for water system projects prior to permanent financing from the sale of long-term revenue bonds. DWR has authority to issue up to \$141.5 million of Water Revenue Commercial Paper Notes. A positive number indicates money borrowed from the program to finance construction costs. A negative number indicates money repaid to the program. The financial analysis assumes that all funds borrowed from the program will be repaid before the end of the analysis period.

Line 35, Application of Capital Resources Revenues to Construction, presents the Capital Resources Revenues applied for capital expenditures.

Line 36, Revenue Transfers Applied, shows monies assumed to be transferred to the California Water Fund, according to provisions of the Burns-Porter Act, and subsequently reappropriated to construction (see Line 40 of Table 14-2). Projected amounts for 2010 through 2020 include funds to finance expenditures for agricultural drainage facilities, as indicated in Line 13 of Table 14-1, and expenditures for additional conservation facilities, as indicated in Line 12.

Line 37, Subtotal, Other Capital Financing, is the total of Lines 31 through 36.

Line 38, Total Financing of Capital Requirements, totals Lines 21, 30, and 37.

Annual Revenues and Expenditures

After financial analysis of SWP operations, DWR concluded that projected payments by contractors and other revenues will be adequate to pay annual operations, maintenance, power, and replacement costs and meet all repayment obligations on funds used to finance SWP construction and other authorized costs during the period 2010 through 2020. Data on annual revenues and expenditures are presented in Table 14-2. A detailed discussion of each line item follows.

Project Revenues

Project revenues primarily consist of SWP contractor payments required under their individual long-term water supply contracts. Those revenues are deposited in two funds: the Central Valley Water Project Revenue Fund, where all revenues pledged to revenue bonds are placed, and the California Water Resources Development Bond Fund—Systems Revenue Account, where all other SWP operating revenues are placed. Use of those funds is limited to paying operating costs and debt service; except that revenues in excess of those costs may be deposited to a reserve for future SWP construction, since the California Water Fund has been repaid (see Line 39).

Line 1, Capital Resources Revenues, includes the following:

- federal payments for SWP capital expenditures;
- appropriations for capital costs allocated to recreation;

- appropriations for SWP capital expenditures prior to passage of the Burns-Porter Act and according to Senate Bill 261 (1968);
- payments from Los Angeles Department of Water and Power for Castaic power development;
- advances from contractors for construction of requested work;
- investment earnings on the Capital Resources Account; and
- investment earnings on unexpended revenue bond proceeds.

Historically, appropriations for capital costs allocated to recreation and fish and wildlife enhancement have amounted to \$5 million per year and have been appropriated by the California Legislature from the State tideland oil revenues. There have been no appropriations since 1985, and no appropriations are indicated in the financial analysis for 2010 through 2020. Legislation enacted in 1989 offset a portion of the amount owed to the SWP by the State for costs allocated to recreation and fish and wildlife enhancement against the amount the SWP owed to the California Water Fund (see Line 39). Since the final offset in 1994, DWR has accumulated \$44.6 million in capital costs through fiscal year 2006–2007.

Lines 2 through 12, Water Contractor Payments, show amounts of the separate elements of water contractor payments.

Amounts in Line 4 also include revenues sufficient to cover costs associated with sales of excess power. Appendix B of this bulletin presents a detailed explanation of payments identified in Lines 2 through 12.

Operations, maintenance, power, and replacement (OMP&R) costs are repaid as they are incurred as part of the Transportation Charge; therefore, no interest charges are included. Construction costs included in the Transportation Charge,

and all construction and annual OMP&R costs included in the Delta Water Charge, are to be repaid with interest at the Project Interest Rate.

The Project Interest Rate, as defined in Article 1(r) of the standard provisions for water supply contracts, is the weighted average of the rates paid on certain securities issued and loans obtained to finance SWP facilities.

According to the original water supply contract provisions, the basis for determining the Project Interest Rate was the weighted average of rates paid on general obligation bond sales only. In 1969, after Oroville Revenue Bonds were issued, the contracts were amended to expand the basis to include rates on all other securities sold and loans obtained thereafter for financing SWP facilities, including revenue bonds (see Bulletin 132-70, page 28).

However, not all proceeds from the sale of revenue bonds are melded into the calculation of the Project Interest Rate. Only those proceeds applied to construction costs (the only application of general obligation bonds permitted by law) and those consumed by the bond discount (a component of the total interest cost of a revenue bond issue) are included in the calculation (see Table 14-8).

Calculations for determining the Project Interest Rate do not include proceeds from the sale of revenue bonds for Off-Aqueduct Power facilities, the East Branch Enlargement facilities, SBA, or water system facilities defined in the Water Revenue Bond Amendment. Table 14-9 lists all bond sales by date and presents basic information used in the calculation of the Project Interest Rate.

Information about contractor water charges in Appendix B is based on known conditions and substantiates DWR's determination of 2011 water charges to be billed on

July 1, 2010. However, information about significant differences between the sum of future charges included in Lines 2 through 12 of Table 14-2 and the substantiation of 2011 charges included in Appendix B are as follows.

- Future capital costs in Appendix B are based on the prevailing prices as of December 31, 2009. Those costs presented in the financial analysis include allowances for price escalation.
- Pre-2010 charges in Appendix B represent charges as they should have been, according to currently known conditions. Pre-2010 charges included in Table 14-2 are those actually paid as part of previously determined bills.
- Charges in Appendix B are unadjusted for past overpayments or underpayments. Charges included in Table 14-2 for 2010 and thereafter have been adjusted for any apparent overpayments or underpayments of pre-2010 charges.
- Charges in Appendix B for East Branch Enlargement costs include the amounts for debt service and 25 percent cover for the East Branch Enlargement share of the Series A through Series AG bonds. Charges in Table 14-2 apply to Series A through Series AG bonds and also include amounts of the debt service and cover for assumed future bonds.
- The water revenue bond surcharge in Appendix B applies only to the Series B through Series AG bonds. Surcharge values included in Table 14-2 apply to Series B through Series AG bonds and to assumed future issues required to finance SWP construction costs included in Table 14-1.

Line 13, Subtotal, Water Contractor Payments, is the total of Lines 2 through 12.

Line 14, Revenue Bond Cover Adjustments, represents the credit to contractors resulting from the cover of 25 percent of the annual

debt service for Power Facilities Revenue Bonds and Water System Revenue Bonds. Cover is collected as required by the bond resolutions to provide security to the bondholders. If not needed to meet annual bond service, the cover is credited to the contractors in the following year. The annual charges for the following cost components include an amount for bond cover:

- minimum OMP&R component of the Transportation Charge for Off-Aqueduct Power Facilities;
- Water System Revenue Bond Surcharge;
- capital cost component of the Transportation Charge for East Branch Enlargement Facilities;
- capital cost component of the Transportation Charge for Coastal Branch Extension Facilities;
- capital cost component of the Transportation Charge for East Branch Extension Facilities;
- capital cost component of the Transportation Charge for Tehachapi Afterbay; and
- capital cost component of the Transportation Charge for SBA Enlargement.

Line 15, Rate Management Adjustments, shows the projected amount of revenue reductions allocated to contractors after repayment of the California Water Fund (see Line 39). Under provisions of the Monterey Amendment, the reduction amount allocated to agricultural contractors is deposited into a trust fund to stabilize payments in water-short years. The urban contractor allocation is applied as a direct reduction in charges.

Line 16, Federal Payments for Project Operating Costs, shows federal payments made in accordance with the December 31, 1961, agreement between California and the United States providing for DWR to operate and maintain the San Luis Joint-Use Facilities. According to the January 12, 1972,

Table 14-8 Revenue Bond Proceeds Affecting Project Interest Rate (Millions of Dollars)

| Project | Proceeds Included in Project Interest Rate | | | | Total Principal Amount of Bonds | Percentage of Total Amount Included in Calculating Project Interest Rate [4] / [5] |
|--|--|--|---|--|---------------------------------|--|
| | Applied to Construction Costs | Less Portion of Proceeds Derived from Interest Earnings Prior to Delivery of Bonds | Plus Bond Financing and Refunding Costs | Subtotal, Proceeds Included in Calculating Project Interest Rate [1] - [2] + [3] | | |
| | [1] | [2] | [3] | [4] | [5] | [6] |
| Devil Canyon-Castaic Project Revenue Bonds | 125.3 | 1.5 | 1.4 | 125.2 | 139.2 | 90 |
| Pyramid Project Revenue Bonds (Series A) | 71.2 | 0.5 | 1.1 | 71.8 | 95.8 | 75 |
| Alamo Project Bond Anticipation Note | 16.8 | 0.1 | 0.3 | 17.0 | 24.4 | 70 |
| Small Hydro Project I Revenue Bonds (Series D) | 25.4 | 0.2 | 1.5 | 26.7 | 37.5 | 71 |
| Alamo Project Revenue Bonds (Series F) | 38.9 | 0.3 | 0.7 | 39.3 | 50.0 | 79 |
| Power Facilities Revenue Bonds (Series H) | | | | | | |
| Pyramid Project | 5.0 | 0.0 | 0.1 | 5.1 | 5.1 | 100 |
| Alamo Project | 1.7 | 0.0 | 0.0 | 1.7 | 1.7 | 100 |
| Small Hydro Project I | 25.2 ^a | 0.2 | 0.4 | 25.4 | 35.6 | 71 |
| Water System Revenue Bonds (Series J) | | | | | | |
| Pyramid Project | 0.0 | 0.0 | 75.9 ^b | 75.9 | 99.2 ^b | 77 |
| Alamo Project | 0.0 | 0.0 | 45.6 ^b | 45.6 | 57.1 ^b | 80 |
| Small Hydro Project I | 0.0 | 0.0 | 27.8 ^b | 27.8 | 38.8 ^b | 72 |
| Water System Revenue Bonds (Series L) | | | | | | |
| Small Hydro Project I | 0.0 | 0.0 | 1.5 ^b | 1.5 | 2.1 ^b | 71 |
| Water System Revenue Bonds (Series Q) | | | | | | |
| Pyramid Project | 0.0 | 0.0 | 3.0 ^b | 3.0 | 3.9 ^b | 77 |
| Alamo Project | 0.0 | 0.0 | 4.8 ^b | 4.8 | 6.0 ^b | 80 |
| Water System Revenue Bonds (Series S) | | | | | | |
| Pyramid Project | 0.0 | 0.0 | 8.0 ^b | 8.0 | 10.4 ^b | 77 |
| Alamo Project | 0.0 | 0.0 | 7.6 ^b | 7.6 | 9.5 ^b | 80 |
| Water System Revenue Bonds (Series U) | | | | | | |
| Pyramid Project | 0.0 | 0.0 | 2.4 ^b | 2.4 | 3.2 ^b | 75 |
| Alamo Project | 0.0 | 0.0 | 3.2 ^b | 3.2 | 4.0 ^b | 80 |
| Water System Revenue Bonds (Series W) | | | | | | |
| Pyramid Project | 0.0 | 0.0 | 27.7 ^b | 27.7 | 36.0 ^b | 77 |
| Alamo Project | 0.0 | 0.0 | 11.8 ^b | 11.8 | 14.7 ^b | 80 |
| Small Hydro Project (construction) | 3.4 | 0.0 | 0.0 | 3.4 | 3.7 | 92 |
| Small Hydro Project (refunding) | 0.0 | 0.0 | 16.3 ^b | 16.3 | 22.7 ^b | 72 |
| Water System Revenue Bonds (Series X) | | | | | | |
| Pyramid Project | 0.0 | 0.0 | 8.5 ^b | 8.5 | 11.0 ^b | 77 |
| Alamo Project (Series H refunding) | 0.0 | 0.0 | 0.3 ^b | 0.3 | 0.3 ^b | 100 |
| Alamo Project (Series F refunding) | 0.0 | 0.0 | 3.9 ^b | 3.9 | 4.9 ^b | 79 |
| Small Hydro Project | 0.0 | 0.0 | 4.6 ^b | 4.6 | 6.4 ^b | 72 |
| Water System Revenue Bonds (Series AC) | | | | | | |
| Pyramid Project | 0.0 | 0.0 | 3.8 ^b | 3.8 | 5.0 ^b | 76 |
| Alamo Project | 0.0 | 0.0 | 2.8 ^b | 2.8 | 3.6 ^b | 80 |
| Small Hydro Project | 0.0 | 0.0 | 1.2 ^b | 1.2 | 1.6 ^b | 72 |
| Water System Revenue Bonds (Series AD) | | | | | | |
| Pyramid Project | 0.0 | 0.0 | 3.2 ^b | 3.2 | 4.2 ^b | 76 |
| Alamo Project | 0.0 | 0.0 | 2.6 ^b | 2.6 | 3.3 ^b | 80 |
| Small Hydro Project | 0.0 | 0.0 | 0.7 ^b | 0.7 | 1.0 ^b | 72 |

^aAmount consists of 71 percent of proceeds deposited in escrow to refund portion of Series D bonds (\$35.1 million plus deposits to construction account [\$0.3 million]).

^bRepresents amount of principal used to refund portions of prior bond issuances.

Table 14-9 Actual Bond Sales and Project Interest Rates, by Date of Sale

| Bond Sales | Date of Sale | Dollar-Years ^a (Thousands) | Interest Cost (Thousands) | Issue Interest Rate ^b (Percent) | Project Interest Rate ^c (Percent) |
|--|--------------|--|------------------------------|--|--|
| \$ 50,000,000 Bond Anticipation Notes | 11/21/63 | 26,944 | 531 | 1.971 | 1.971 |
| \$100,000,000 Series A Water Bonds | 2/18/64 | 3,402,000 | 119,750 | 3.520 | 3.508 |
| \$ 50,000,000 Series B Water Bonds | 5/05/64 | 1,726,000 | 60,986 | 3.533 | 3.516 |
| \$100,000,000 Series C Water Bonds | 10/07/64 | 3,452,000 | 123,764 | 3.585 | 3.544 |
| \$100,000,000 Series D Water Bonds | 2/16/65 | 3,497,900 | 122,403 | 3.499 | 3.531 |
| \$100,000,000 Series E Water Bonds | 11/23/65 | 3,497,900 | 130,029 | 3.717 | 3.573 |
| \$100,000,000 Series F Water Bonds | 6/08/66 | 3,497,900 | 137,359 | 3.927 | 3.638 |
| \$100,000,000 Series G Water Bonds | 11/22/66 | 3,497,900 | 143,788 | 4.111 | 3.711 |
| \$100,000,000 Series H Water Bonds | 3/21/67 | 3,497,900 | 129,261 | 3.695 | 3.709 |
| \$100,000,000 Series J Water Bonds | 7/18/67 | 3,497,900 | 143,199 | 4.094 | 3.754 |
| \$100,000,000 Series K Water Bonds | 11/14/67 | 3,497,900 | 163,887 | 4.685 | 3.853 |
| \$150,000,000 Revenue Bonds, Oroville Division, Series A | 4/03/68 | 5,228,700 | 270,289 | 5.169 | |
| \$100,000,000 Series L Water Bonds | 7/11/68 | 3,497,900 | 166,918 | 4.772 | 3.941 |
| \$100,000,000 Series M Water Bonds | 10/22/68 | 3,497,900 | 169,989 | 4.860 | 4.021 |
| \$ 94,995,000 Revenue Bonds, Oroville Division, Series B | 4/01/69 | 3,423,460 | 195,902 | 5.722 | |
| \$ 46,761,000 Cumulative 1970 General Fund Borrowing, repaid 7/10/70 | — | 4,938 | 346 | 7.007 | |
| \$200,000,000 Series N and P Bond Anticipation Notes | 6/16/70 | 200,000 | 11,660 | 5.830 | 4.030 |
| \$100,000,000 Series N Water Bonds | 2/02/71 | 3,447,900 | 190,292 | 5.519 | 4.148 |
| \$100,000,000 Series Q Bond Anticipation Notes | 3/10/71 | 100,000 | 2,349 | 2.349 | 4.143 |
| \$100,000,000 Series P Water Bonds | 4/21/71 | 3,397,900 | 193,377 | 5.691 | 4.255 |
| \$150,000,000 Series Q and R Water Bonds | 11/09/71 | 5,171,850 | 265,734 | 5.138 | 4.342 |
| \$ 40,000,000 Series S Water Bonds | 3/28/72 | 1,399,160 | 76,509 | 5.468 | 4.371 |
| \$139,165,000 Devil Canyon-Castaic Revenue Bonds | 8/08/72 | 4,776,204 | 258,839 | 5.419 | 4.457 |
| \$ 10,000,000 Series T Water Bonds | 3/20/73 | 185,265 | 9,491 | 5.123 | 4.459 |
| \$ 10,000,000 Series U Water Bonds | 1/13/76 | 158,750 | 8,731 | 5.500 | 4.462 |
| \$ 10,000,000 Series V Water Bonds | 11/15/77 | 158,750 | 7,573 | 4.770 | 4.462 |
| \$ 95,800,000 Pyramid Hydroelectric Revenue Bonds | 10/23/79 | 2,260,072 | 172,495 | 7.632 | 4.584 |
| \$150,000,000 Reid Gardner Project, Series A Bond Anticipation Notes | 7/1/81 | 347,906 | 29,572 | 8.500 | |
| \$ 75,600,000 Bottle Rock Project, Bond Anticipation Notes | 12/1/81 | 264,600 | 25,137 | 9.500 | |
| \$ 24,400,000 Alamo Project, Bond Anticipation Notes | 12/1/81 | 24,266 | 2,305 | 9.499 | 4.589 |
| \$200,000,000 Reid Gardner Project, Series B Revenue Bonds | 7/07/82 | 4,623,137 | 553,793 | 11.979 | |
| \$125,000,000 Reid Gardner Project, Series C Revenue Bonds | 11/16/82 | 2,720,045 | 255,744 | 9.402 | |
| \$ 37,500,000 Small Hydro Project I, Series D Revenue Bonds | 11/16/82 | 837,769 | 84,587 | 10.097 | 4.666 |
| \$ 37,500,000 South Geysers Project, Series D Revenue Bonds | 11/16/82 | 930,325 | 90,021 | 9.676 | |
| \$125,000,000 Bottle Rock Project, Series E Revenue Bonds | 4/27/83 | 2,624,805 | 225,102 | 8.576 | |
| \$ 50,000,000 Alamo Project, Series F Revenue Bonds | 4/27/83 | 1,190,763 | 100,836 | 8.468 | 4.727 |
| \$ 25,000,000 South Geysers Project, Series F Revenue Bonds | 4/27/83 | 608,550 | 52,578 | 8.640 | |
| \$239,505,000 Reid Gardner Project, Series G Revenue Bonds | 3/15/85 | 4,524,136 | 425,840 | 9.413 | |
| \$206,690,000 Power Facilities Series H Revenue Bonds | 6/20/86 | 4,430,520 | 347,745 | 7.849 | 4.713 |
| \$132,000,000 East Branch Enlargement, Series A Water System Revenue Bonds | 7/15/86 | 3,427,165 | 254,915 | 7.438 | |

Table 14-9 Actual Bond Sales and Project Interest Rates, by Date of Sale

| Bond Sales | Date of Sale | Dollar-Years ^a (Thousands) | Interest Cost (Thousands) | Issue Interest Rate ^b (Percent) | Project Interest Rate ^c (Percent) |
|--|--------------|--|------------------------------|--|--|
| \$100,000,000 Series B Water System Revenue Bonds | 5/05/87 | 2,564,012 | 194,817 | 7.598 | |
| \$ 9,000,000 Series C Water System Revenue Bonds | 12/01/87 | 324,000 | 31,995 | 9.875 | |
| \$100,000,000 Series D Water System Revenue Bonds | 6/14/88 | 2,640,510 | 201,253 | 7.622 | |
| \$ 9,000,000 Series E Water System Revenue Bonds | 11/29/88 | 324,000 | 31,995 | 9.875 | |
| \$160,030,000 Series F Water System Revenue Bonds | 3/15/89 | 2,779,838 | 189,261 | 6.808 | |
| \$100,000,000 Series G Water System Revenue Bonds | 3/06/90 | 2,434,175 | 172,277 | 7.077 | |
| \$100,000,000 Series H Water System Revenue Bonds | 1/10/91 | 2,459,172 | 168,857 | 6.866 | |
| \$180,000,000 Series I Water System Revenue Bonds | 5/14/91 | 4,366,680 | 294,090 | 6.735 | |
| \$649,835,000 Series J Water System Revenue Bonds | 1/16/92 | 12,422,222 | 745,198 | 5.999 | |
| \$100,000,000 Series K Water System Revenue Bonds | 5/12/92 | 2,366,783 | 147,064 | 6.214 | |
| \$ 9,000,000 Series W Water Bonds | 8/19/92 | 95,250 | 6,172 | 6.480 | 4.621 |
| \$537,830,000 Series L Water System Revenue Bonds | 5/19/93 | 11,414,859 | 640,518 | 5.611 | 4.620 |
| \$ 2,000,000 Series X Water Bonds | 9/01/93 | 26,000 | 1,247 | 4.796 | 4.621 |
| \$ 1,400,000 Series Y Water Bonds | 11/30/94 | 19,483 | 1,249 | 6.411 | |
| \$190,000,000 Series M Water System Revenue Bonds | 12/19/93 | 3,911,846 | 194,981 | 4.984 | |
| \$152,000,000 Series N Water System Revenue Bonds | 3/03/95 | 2,241,606 | 122,658 | 5.472 | |
| \$335,000,000 Series O Water System Revenue Bonds | 12/05/95 | 7,528,890 | 375,667 | 4.990 | |
| \$160,000,000 Series P Water System Revenue Bonds | 5/07/96 | 3,553,823 | 204,524 | 5.755 | |
| \$266,630,000 Series Q Water System Revenue Bonds | 11/05/96 | 5,481,815 | 299,846 | 5.470 | 4.620 |
| \$20,700,000 Series R Water System Revenue Bonds | 3/10/97 | 564,125 | 36,627 | 6.493 | |
| \$200,205,000 Series S Water System Revenue Bonds | 8/04/97 | 4,093,110 | 203,755 | 4.978 | 4.615 |
| \$135,665,000 Series T Water System Revenue Bonds | 8/04/97 | 1,310,620 | 66,942 | 5.108 | |
| \$207,180,000 Series U Water System Revenue Bonds | 12/01/98 | 4,032,075 | 200,758 | 4.979 | |
| \$ 20,580,000 Series V Water System Revenue Bonds | 12/01/98 | 525,100 | 32,819 | 6.250 | |
| \$260,995,000 Series W Water System Revenue Bonds | 5/01/01 | 3,659,312 | 195,822 | 5.351 | 4.613 |
| \$160,225,000 Series X Water System Revenue Bonds | 5/01/02 | 2,732,785 | 139,109 | 5.090 | 4.610 |
| \$329,885,000 Series Y Water System Revenue Bonds | 7/05/02 | 4,422,973 | 222,654 | 5.034 | |
| \$170,655,000 Series Z Water System Revenue Bonds | 10/02/02 | 1,706,132 | 75,696 | 4.437 | |
| \$108,705,000 Series AA Water System Revenue Bonds | 10/04/02 | 2,114,341 | 104,220 | 4.929 | |
| \$189,625,000 Series AB Water System Revenue Bonds | 3/09/04 | 4,344,942 | 173,788 | 4.000 | |
| \$272,070,000 Series AC Water System Revenue Bonds | 12/15/04 | 4,479,436 | 209,150 | 4.669 | |
| \$112,390,000 Series AD Water System Revenue Bonds | 6/14/05 | 1,827,449 | 90,461 | 4.950 | 4.608 |
| \$632,890,000 Series AE Water System Revenue Bonds | 5/1/08 | 8,884,001 | 436,216 | 4.910 | |
| \$287,735,000 Series AF Water System Revenue Bonds | 11/17/09 | 2,980,895 | 431,199 | 14.465 | |
| \$169,115,000 Series AG Water System Revenue Bonds | 3/10/09 | 2,907,605 | 311,889 | 10.727 | |
| Total | | 214,094,844 | 12,678,400 | | |
| Portion allocated to Project Interest Rate | | 63,889,878 | 2,943,940 | 4.608 | 4.608 |

^aA unit equivalent to one dollar of principal amount outstanding for one year.

^bThe total interest cost (without regard to discounts paid or to premiums received) divided by the total dollar-years, expressed as a percent.

^cDetermined by dividing cumulative interest costs by cumulative dollar-years, expressed as a percent. (Oroville Division bonds and revenue bonds for Off-Aqueduct Power Facilities, the East Branch Enlargement Facilities, East Branch Extension Facilities, Water System Facilities as defined in the Water Revenue Bond Amendment, Coastal Extension Facilities, and SBA Enlargement Facilities are excluded from this calculation.)

supplement to the agreement, the Bureau of Reclamation (Reclamation) initially paid 45 percent of operations, maintenance, and replacement (OM&R) costs for those activities. (The percentage does not apply to power costs; Reclamation and DWR each provide their own power to pump water through the joint facilities.)

The percentage paid by Reclamation is periodically reviewed by Reclamation and DWR. The most recent review of the percentage paid by Reclamation was completed in 1987 and resulted in a federal share of 44.09 percent. The amounts in Line 16 are based on the assumption that the federal share will continue at this level for calendar years 2010 through 2020.

Line 17, Appropriations for Operating Costs Allocated to Recreation, shows appropriations made under the Davis-Dolwig Act. In passing the Davis-Dolwig Act, the California Legislature declared its intent that except for funds provided according to Assembly Bill 12 (1966), DWR's budget will include appropriations of monies from the General Fund necessary for enhancement of fish and wildlife and recreation in connection with State water projects.

Annual OMP&R costs allocated to recreation and fish and wildlife enhancement are to be paid by annual appropriations from the General Fund. Through fiscal year 1982–1983, these appropriations totaled \$16.657 million. There have been no additional appropriations since the 1982–1983 fiscal year and none are indicated for 2010 through 2020.

Legislation enacted in 1989 offset a portion of the amount owed to the SWP by the State for costs allocated to recreation and to fish and wildlife enhancement against the amount the SWP owed to the California Water Fund (see line 39). Since the final offset in 1994, DWR has accumulated

\$110.7 million in OMP&R costs through fiscal year 2006–2007.

Line 18, Davis-Grunsky Loan Repayments, shows the repayments by local agencies of \$54.2 million of loans disbursed as of December 31, 2009. Repayment on any future loans was assumed to be beyond the period covered by the financial analysis.

Line 19, Revenue Bond Proceeds, includes bond proceeds classified as special reserves according to the description of revenue bond financing in Line 17 of Table 14-1. Those proceeds, used for capitalized OMP&R costs, revenue bond debt service, and debt service reserves, are not classified as revenue but are included in this line to simplify the financial presentation.

Line 20, Interest Earnings on Operating Revenues, includes interest earnings on unexpended proceeds from the sale of general obligation bonds, interest on operating reserves, and other short-term investment earnings on SWP revenues.

Line 21, Oroville-Thermalito Payments, shows payments from Pacific Gas & Electric Company, Southern California Edison, and San Diego Gas & Electric Company for power generation at the Oroville facilities. Those utilities purchased all power generation from Hyatt and Thermalito powerplants before April 1, 1983, in accordance with a power sale contract dated November 29, 1967. The historic amount includes the amounts of final settlement of payments made according to the contract.

Line 22, Miscellaneous Revenues, includes all other operating revenues not included in Lines 2 through 21.

Line 23, Subtotal, Other Revenues, is the total of Lines 16 through 22.

Line 24, Total Operating Revenues, is the total of Lines 13, 14, 15, and 23.

Line 25, Total Operating Revenues and Capital Resources Revenues, is the total of Lines 1 and 24.

Project Expenses

Project expenses include the following:

- operations, maintenance, and power costs;
- deposits to replacement reserves;
- deposits to special reserves;
- capital resources expenditures; and
- debt service.

Revenue bond proceeds earmarked for debt service during construction and the first year's operating expenses are deposited in the Central Valley Water Project Construction Fund and disbursed in accordance with resolutions authorizing the issuance of such bonds.

Water contractor revenues associated with operating costs and debt service attributable to projects financed by revenue bonds are deposited in the Central Valley Water Project Revenue Fund for appropriate disbursement. All other operating revenues are deposited in the California Water Resources Development Bond Fund—Systems Revenue Account and are disbursed in accordance with the following four priorities of use, as specified in the Burns-Porter Act:

- SWP OMP&R costs;
- general obligation bond debt service;
- repayment of expenditures from the California Water Fund; and
- deposits to a reserve for future SWP construction.

Project expenses are presented in Lines 26 through 36 of Table 14-2.

Line 26, Project Operations, Maintenance, Power, and Replacement Costs, shows the OMP&R portion of the historical and projected costs presented in Table 14-10, at the end of this chapter.

Table 14-10 and Line 26 of Table 14-2 also include the amounts of the operations and maintenance costs for the federal share of joint facilities and those OMP&R costs allocated to recreation, which are intended to be offset by revenues listed in Lines 16 and 17.

Allowances for cost escalations are included in OMP&R costs through 2010. Allowances for additional long-term price escalations in the future are not included in these estimates, because changes in OMP&R costs do not substantially affect the overall results of the financial analysis. (For the most part, changes in OMP&R costs cause direct offsetting changes in operating revenues.)

Power costs make up the major item of annual operating expenses for the SWP. Assumptions about future power sources and costs are discussed in Chapter 10, Power Resources. Line 26 also includes costs associated with power transactions that result in the sale of power not required for the delivery of water.

Line 27, Deposits to Replacement Reserves, shows funds set aside as required by contract for replacing existing SWP facilities. By December 31, 2009, \$112.0 million had been spent for replacement costs; the balance of the replacement reserve as of that date was \$36.9 million.

Line 28, Deposits to Special Reserves Under Revenue Bond Financing, includes two significant components: special reserve deposits related to revenue bonds and capital resources revenue carryover from prior years used for construction in the current year. Special reserve deposits are the

net of several income and expenditure items. Income items related to revenue bonds are:

- proceeds set aside to pay bond interest during construction (capitalized interest);
- proceeds set aside for first year operating costs (capitalized operations and maintenance);
- water contractor payments or bond proceeds set aside for debt service reserves;
- water contractor payments for revenue bond cover requirements; and
- deposits to and withdrawals from operating reserves to meet day-to-day cash flow requirements.

The 1952–2009 column also includes advances to DWR’s revolving fund for working funds to purchase mobile equipment and to meet day-to-day operating expenses.

The expenditure items related to revenue bonds include:

- debt service cover payments returned to contractors;
- debt service reserve interest payments returned to contractors;
- surplus account funds returned to contractors or applied to meet expenses;
- total capitalized interest paid out; and
- total capitalized operations and maintenance paid out.

Special reserves, reduced over time as reserved amounts, are used for their respective purposes. The amount indicated each year in Line 28 reflects the change from the previous year. A negative number indicates a withdrawal of special reserves to meet expenses, while a positive number indicates a deposit.

Line 29, Capital Resources Expenditures, includes the amount of capital resources revenues applied to construction that

is shown in Line 35 of Table 14-1. In Table 14-2, these expenditures are funded out of withdrawals from the reserves in Line 28 and do not affect net revenues shown in Line 38.

Lines 30 and 31, Payment of Debt Service on Bonds Sold through December 31, 2009, show the total principal and interest payments, respectively, on bonds sold to date. Table 14-11, at the end of this chapter, summarizes payments on general obligation bonds (Series A through Y water bonds), power revenue bonds by project, and water system revenue bonds (Series A through AG).

Lines 32 and 33, Payments on Projected Future Water Bonds, include the projected annual debt service amounts for future water revenue bonds included on Lines 23, 25, 27, and 29 of Table 14-1 for the East Branch Enlargement, East Branch Extension, SBA Enlargement, and other water system facilities. Assumptions about the service on these future bonds are that interest costs for the water revenue bonds average 4.0 percent; and that bonds are to be repaid by the end of the project repayment period (2035) or sooner, with maturities commencing in the year following the date of sale and with equal annual bond service for the principal repayment period.

Lines 34 and 35, Total Payments of Bond Debt Service, show the total of principal payments indicated on Lines 30 and 32, and the total of interest repayments indicated on Lines 31 and 33.

Line 36, Subtotal, Debt Service, is the total of Lines 34 and 35.

Line 37, Total Operating Expenses and Debt Service, is the total of Lines 26, 27, 28, 29, and 36.

Line 38, Net System Revenues, shows the annual amounts of revenues remaining after

the payment of operating costs and bond debt service costs.

Line 39, California Water Fund Repayment, shows the total amount of repayments made to the California Water Fund to reimburse the fund for monies expended for construction of the State Water Resources Development System.

Repayment of the California Water Fund was completed in 1998. The \$508 million includes the \$306 million of repayments shown in Line 39 and the \$202 million of reimbursement that was credited to the SWP as offsets for recreation and fish and wildlife enhancement expenditures.

Line 40, Revenues Used for Capital Expenditures, includes the amounts required annually for financing scheduled capital expenditures. Revenues not needed for operating costs or debt services are available for financing SWP capital expenditures.

Future Costs of Water Service

Estimates of future water costs are useful to contractors for short-range and long-range planning of water needs, operations, and budgets. Unit water charges shown in Table 14-12 represent costs of water delivery by service area for calendar years 2011 and 2016. The unit rates include costs of existing and future SWP facilities accounted for in Table 14-1 and Table 14-7. The unit water charges are based on the assumption that in 2011 and 2016, the SWP will be able to deliver the entire amount of water requested by each contractor. The unit water charges included in Table 14-12 are listed both as 2011 dollars and as escalated rates reflecting assumed future inflation of 2.5 percent per year through 2016.

Table 14-12 Estimated Unit Water Charges for 2011 and 2016, by Service Area (Dollars per Acre-foot)

| Service Area and Charge | 2011 | 2016 |
|--|-------------------|-------------------|
| | (In 2011 Dollars) | (In 2016 Dollars) |
| Feather River Area | | |
| Capital; Operations, Maintenance, and Replacement (OM&R) | 131 | 148 |
| North Bay Area | | |
| Capital; OM&R | 285 | 322 |
| Power | 59 | 67 |
| Total | 344 | 389 |
| South Bay Area | | |
| Capital; OM&R | 186 | 210 |
| Power | 60 | 68 |
| Total | 246 | 278 |
| Coastal Area | | |
| Capital; OM&R | 818 | 925 |
| Power | 167 | 189 |
| Total | 985 | 1,114 |
| San Joaquin Area | | |
| Capital; OM&R | 78 | 88 |
| Power | 26 | 29 |
| Total | 104 | 117 |
| Southern California Area | | |
| Capital; OM&R | 200 | 226 |
| Power | 188 | 213 |
| Total | 388 | 439 |

Table 14-1 Capital Requirements and Financing, December 31, 2009 (Thousands of Dollars)

| Line Number/Item | Calendar Year | | | | | | | | | | | | | |
|---|------------------|-----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------------|--------------|--------------|------------------|------------------|
| | 1952–2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2010–2020 | 1952–2020 |
| Capital Requirements | | | | | | | | | | | | | | |
| 1. Initial Project Facilities | 2,202,316 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,202,316 |
| 2. North Bay Aqueduct | 104,078 | 4,331 | 3,635 | 4,551 | 25,030 | 60,000 | 60,000 | 128,000 | 112,439 | 0 | 0 | 0 | 397,986 | 502,064 |
| 3. Delta and Suisun Marsh Facilities | 264,270 | 2,314 | 12,151 | 8,194 | 644 | 644 | 0 | 0 | 0 | 0 | 0 | 0 | 23,947 | 288,217 |
| 4. Final 4 Units at Banks Pumping Plant | 43,673 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 43,673 |
| 5. Coastal Branch Aqueduct | 507,416 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 507,416 |
| 6. West Branch Aqueduct | 206,637 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 206,637 |
| 7. East Branch Enlargement | 459,877 | 1,471 | 34,151 | 79,739 | 84,255 | 84,532 | 84,483 | 62,243 | 4,866 | 0 | 0 | 0 | 435,740 | 895,617 |
| 8. East Branch Improvements | 344,728 | 925 | 125 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,050 | 345,778 |
| 9. East Branch Extension | 147,877 | 37,199 | 91,851 | 71,019 | 13,138 | 431 | 0 | 0 | 0 | 0 | 0 | 0 | 213,638 | 361,515 |
| 10. South Bay Aqueduct Improvements and Enlargement | 160,025 | 44,241 | 11,672 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 55,913 | 215,938 |
| 11. Power Generation and Transmission Facilities | 718,483 | 2,500 | 3,400 | 3,400 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9,300 | 727,783 |
| 12. Additional Conservation Facilities | 158,419 | 4,193 | 4,480 | 4,480 | 4,480 | 4,480 | 4,480 | 3,906 | 3,906 | 3,906 | 3,906 | 3,906 | 46,123 | 204,542 |
| 13. Agricultural Drainage Facilities | 76,566 | 1,940 | 1,700 | 1,550 | 1,500 | 1,500 | 1,500 | 1,500 | 1,500 | 1,500 | 1,500 | 1,500 | 17,190 | 93,756 |
| 14. Other Costs | 395,234 | 97,296 | 152,937 | 143,527 | 85,208 | 41,907 | 29,783 | 14,938 | 0 | 0 | 0 | 0 | 565,596 | 960,830 |
| 15. <i>Subtotal, Project Construction Expenditures</i> | <i>5,789,599</i> | <i>196,410</i> | <i>316,102</i> | <i>316,460</i> | <i>214,255</i> | <i>193,494</i> | <i>180,246</i> | <i>210,587</i> | <i>122,711</i> | <i>5,406</i> | <i>5,406</i> | <i>5,406</i> | <i>1,766,483</i> | <i>7,556,082</i> |
| 16. Davis-Grunsky Act Program Costs | 130,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 130,000 |
| 17. Special Capital Requirements Under Revenue Bond Financing | 609,388 | 30,689 | 31,351 | 34,107 | 22,582 | 19,294 | 19,301 | 20,776 | 12,409 | 0 | 0 | 0 | 190,509 | 799,897 |
| 18. Total Capital Requirements | 6,528,987 | 227,099 | 347,453 | 350,567 | 236,837 | 212,788 | 199,547 | 231,363 | 135,120 | 5,406 | 5,406 | 5,406 | 1,956,992 | 8,485,979 |
| 19. Power Facilities Capital Requirements | 718,483 | 2,500 | 3,400 | 3,400 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9,300 | 727,783 |
| 20. Water Facilities Capital Requirements | 5,810,504 | 224,599 | 344,053 | 347,167 | 236,837 | 212,788 | 199,547 | 231,363 | 135,120 | 5,406 | 5,406 | 5,406 | 1,947,692 | 7,758,196 |
| Financing of Capital Requirements | | | | | | | | | | | | | | |
| Power Facilities Revenue Bond Proceeds | | | | | | | | | | | | | | |
| 21. Power Facilities Revenue Bonds through Series H | 1,162,458 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,162,458 |
| Water System Revenue Bond Proceeds | | | | | | | | | | | | | | |
| 22. East Branch Enlargement, Current Bonds | 473,606 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 473,606 |
| 23. East Branch Enlargement, Future Bonds | 0 | 8,720 | 37,740 | 88,110 | 93,105 | 93,410 | 93,355 | 68,775 | 5,375 | 0 | 0 | 0 | 488,590 | 488,590 |
| 24. East Branch Extension, Current Bonds | 183,822 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 183,822 |
| 25. East Branch Extension, Future Bonds | 0 | 18,345 | 101,490 | 78,475 | 14,520 | 480 | 0 | 0 | 0 | 0 | 0 | 0 | 213,310 | 213,310 |
| 26. So. Bay Aqueduct Enlargement, Current Bonds | 131,198 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 131,198 |
| 27. So. Bay Aqueduct Enlargement, Future Bonds | 0 | 29,790 | 9,060 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 38,850 | 38,850 |
| 28. Water System Facilities, Current Bonds | 1,735,898 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,735,898 |
| 29. Water System Facilities, Future Bonds | 0 | 267,200 | 181,750 | 192,395 | 130,000 | 109,110 | 109,780 | 150,000 | 125,245 | 0 | 0 | 0 | 1,265,480 | 1,265,480 |
| 30. <i>Subtotal, Water System Revenue Bonds</i> | <i>2,524,524</i> | <i>324,055</i> | <i>330,040</i> | <i>358,980</i> | <i>237,625</i> | <i>203,000</i> | <i>203,135</i> | <i>218,775</i> | <i>130,620</i> | <i>0</i> | <i>0</i> | <i>0</i> | <i>2,006,230</i> | <i>4,530,754</i> |
| Other Capital Financing | | | | | | | | | | | | | | |
| 31. Initial Project Facilities Bond Proceeds | 1,452,452 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,452,452 |
| 32. Davis-Grunsky Act Program Bond Proceeds | 130,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 130,000 |
| 33. Application of CA Water Fund Monies (Tideland Oil Revenues) | 508,056 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 508,056 |
| 34. Interim Financing | 98,738 | (101,456) | 12,913 | (12,913) | (5,288) | 5,288 | (8,088) | 8,088 | 0 | 906 | 906 | 906 | (98,738) | 0 |
| 35. Application of Capital Resources Revenues to Construction | 566,269 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 566,269 |
| 36. Revenue Transfers Applied | 86,490 | 4,500 | 4,500 | 4,500 | 4,500 | 4,500 | 4,500 | 4,500 | 4,500 | 4,500 | 4,500 | 4,500 | 49,500 | 135,990 |
| 37. <i>Subtotal, Other Capital Financing</i> | <i>2,842,005</i> | <i>(96,956)</i> | <i>17,413</i> | <i>(8,413)</i> | <i>(788)</i> | <i>9,788</i> | <i>(3,588)</i> | <i>12,588</i> | <i>4,500</i> | <i>5,406</i> | <i>5,406</i> | <i>5,406</i> | <i>(49,238)</i> | <i>2,792,767</i> |
| 38. Total Financing of Capital Requirements | 6,528,987 | 227,099 | 347,453 | 350,567 | 236,837 | 212,788 | 199,547 | 231,363 | 135,120 | 5,406 | 5,406 | 5,406 | 1,956,992 | 8,485,979 |

Table 14-2 State Water Project Revenues and Expenditures, December 31, 2009 (Thousands of Dollars)

| Line Number/Item | Calendar Year | | | | | | | | | | | | | |
|--|---------------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|-------------|
| | 1952-2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2010-2020 | 1952-2020 |
| PROJECT REVENUES | | | | | | | | | | | | | | |
| 1. Capital resources revenues | 814,701 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 814,701 |
| Water Contractor Payments | | | | | | | | | | | | | | |
| 2. Transportation capital | 4,142,766 | 155,697 | 162,238 | 171,316 | 178,231 | 180,366 | 181,470 | 181,237 | 177,299 | 168,724 | 159,046 | 149,821 | 1,865,445 | 6,008,211 |
| 3. Transportation minimum | 3,429,958 | 196,480 | 205,366 | 201,825 | 198,897 | 200,886 | 202,895 | 204,924 | 206,973 | 209,043 | 211,134 | 213,245 | 2,251,668 | 5,681,626 |
| 4. Transportation variable | 4,635,483 | 134,613 | 317,157 | 270,821 | 265,901 | 286,818 | 331,213 | 342,101 | 321,695 | 353,828 | 335,557 | 339,739 | 3,299,443 | 7,934,926 |
| 5. Off-Aqueduct power facilities | 2,660,262 | 143,162 | 139,391 | 140,573 | 80,307 | 20,032 | 11,729 | 10,031 | 9,630 | 3,924 | 3,900 | 4,210 | 566,889 | 3,227,151 |
| 6. Delta water charge | 2,450,373 | 152,812 | 157,679 | 164,985 | 151,176 | 154,771 | 147,123 | 148,300 | 149,065 | 151,296 | 150,348 | 150,523 | 1,678,078 | 4,128,451 |
| 7. East Branch Enlargement | 773,633 | 45,248 | 46,252 | 49,591 | 56,601 | 64,901 | 74,248 | 82,942 | 90,449 | 90,002 | 91,192 | 89,350 | 780,776 | 1,554,409 |
| 8. East Branch Extension | 90,309 | 15,959 | 17,431 | 25,853 | 33,940 | 34,475 | 34,728 | 34,774 | 36,028 | 35,556 | 35,691 | 35,877 | 340,311 | 430,620 |
| 9. Coastal Extension | 34,531 | 6,096 | 4,012 | 4,015 | 4,306 | 4,857 | 4,917 | 4,852 | 4,610 | 3,596 | 2,782 | 3,781 | 47,824 | 82,355 |
| 10. South Bay Aqueduct Improvements and Enlargement | 11,912 | 16,968 | 14,505 | 15,246 | 15,251 | 15,240 | 15,247 | 15,246 | 15,242 | 15,237 | 15,237 | 15,250 | 168,669 | 180,581 |
| 11. Tehachapi East Afterbay | 8,361 | 6,257 | 6,258 | 6,250 | 6,253 | 6,257 | 6,253 | 6,252 | 6,251 | 6,250 | 6,255 | 6,247 | 68,783 | 77,144 |
| 12. Water revenue bond surcharge | 526,243 | 63,292 | 67,509 | 67,582 | 70,830 | 73,345 | 76,782 | 77,480 | 76,437 | 68,271 | 72,993 | 67,555 | 782,076 | 1,308,319 |
| 13. Subtotal, water contractor payments | 18,763,831 | 936,584 | 1,137,798 | 1,118,057 | 1,061,694 | 1,041,948 | 1,086,604 | 1,108,138 | 1,093,679 | 1,105,727 | 1,084,135 | 1,075,599 | 11,849,961 | 30,613,792 |
| 14. Revenue bond cover adjustments | (683,682) | (53,061) | (53,913) | (56,501) | (54,910) | (54,485) | (56,095) | (57,725) | (58,881) | (54,521) | (56,566) | (54,211) | (610,869) | (1,294,551) |
| 15. Rate management adjustments | (329,317) | (23,494) | (40,470) | (40,470) | (40,470) | (40,470) | (40,470) | (40,470) | (40,470) | (40,470) | (40,470) | (40,470) | (428,194) | (757,511) |
| Other Revenues | | | | | | | | | | | | | | |
| 16. Federal payments for project operating costs | 298,198 | 29,696 | 19,130 | 16,796 | 16,796 | 16,796 | 16,796 | 16,796 | 16,796 | 16,796 | 16,796 | 16,796 | 199,990 | 498,188 |
| 17. Appropriations for operating costs allocated to recreation | 16,657 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16,657 |
| 18. Davis-Grunsky loan repayments | 60,343 | 1,966 | 1,737 | 1,736 | 1,597 | 1,308 | 1,306 | 1,265 | 1,260 | 1,069 | 1,000 | 931 | 15,175 | 75,518 |
| 19. Revenue bond proceeds | 652,977 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 652,977 |
| 20. Interest earnings on operating revenues | 574,731 | 1,000 | 1,000 | 1,500 | 1,500 | 1,500 | 1,500 | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 18,000 | 592,731 |
| 21. Oroville-Thermalito payments | 249,279 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 249,279 |
| 22. Miscellaneous revenues | 184,264 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 184,264 |
| 23. Subtotal, other revenues | 2,036,449 | 32,662 | 21,867 | 20,032 | 19,893 | 19,604 | 19,602 | 20,061 | 20,056 | 19,865 | 19,796 | 19,727 | 233,165 | 2,269,614 |
| 24. Total operating revenues | 19,787,281 | 892,691 | 1,065,282 | 1,041,118 | 986,207 | 966,597 | 1,009,641 | 1,030,004 | 1,014,384 | 1,030,601 | 1,006,895 | 1,000,645 | 11,044,063 | 30,831,344 |
| 25. Total operating revenues and capital resources revenues | 20,601,982 | 892,691 | 1,065,282 | 1,041,118 | 986,207 | 966,597 | 1,009,641 | 1,030,004 | 1,014,384 | 1,030,601 | 1,006,895 | 1,000,645 | 11,044,063 | 31,646,045 |
| PROJECT EXPENSES | | | | | | | | | | | | | | |
| 26. Project operations, maintenance, power, and replacement costs | 10,600,068 | 515,131 | 710,810 | 673,651 | 612,641 | 599,887 | 638,545 | 652,665 | 635,101 | 671,561 | 654,461 | 660,958 | 7,025,411 | 17,625,479 |
| 27. Deposits to replacement reserves | 116,557 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 116,557 |
| 28. Deposits to special reserves | 765,965 | 52,082 | 19,503 | 11,737 | 8,987 | (909) | (4,483) | (3,445) | (7,893) | (2,658) | (6,866) | (11,058) | 54,996 | 820,961 |
| 29. Capital resources expenditures | 686,932 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 686,932 |
| Payments of Debt Service | | | | | | | | | | | | | | |
| 30. Principal repayments on bonds sold through December 31, 2009 (current bonds) | 2,457,321 | 165,138 | 174,294 | 182,015 | 175,585 | 170,169 | 171,504 | 169,935 | 167,820 | 140,304 | 144,885 | 143,637 | 1,805,286 | 4,262,607 |
| 31. Interest on bonds sold through December 31, 2009 (current bonds) | 5,582,884 | 142,814 | 135,431 | 126,825 | 117,940 | 109,954 | 102,109 | 93,935 | 85,786 | 77,505 | 70,527 | 63,219 | 1,126,045 | 6,708,929 |
| 32. Future water bond principal repayments | 0 | 4,147 | 7,781 | 16,537 | 27,003 | 35,020 | 42,772 | 51,305 | 61,262 | 68,807 | 71,558 | 74,421 | 460,613 | 460,613 |
| 33. Future water bond interest payments | 0 | 8,879 | 12,963 | 25,853 | 39,550 | 47,976 | 54,694 | 61,109 | 67,808 | 70,582 | 67,830 | 64,968 | 522,212 | 522,212 |
| 34. Total principal | 2,457,321 | 169,285 | 182,075 | 198,552 | 202,588 | 205,189 | 214,276 | 221,240 | 229,082 | 209,111 | 216,443 | 218,058 | 2,265,899 | 4,723,220 |
| 35. Total interest | 5,582,884 | 151,693 | 148,394 | 152,678 | 157,490 | 157,930 | 156,803 | 155,044 | 153,594 | 148,087 | 138,357 | 128,187 | 1,648,257 | 7,231,141 |
| 36. Subtotal, debt service | 8,040,205 | 320,978 | 330,469 | 351,230 | 360,078 | 363,119 | 371,079 | 376,284 | 382,676 | 357,198 | 354,800 | 346,245 | 3,914,156 | 11,954,361 |
| NET REVENUES | | | | | | | | | | | | | | |
| 37. Total Operating Expenses and Debt Service | 20,209,727 | 888,191 | 1,060,782 | 1,036,618 | 981,706 | 962,097 | 1,005,142 | 1,025,504 | 1,009,884 | 1,026,101 | 1,002,395 | 996,145 | 10,994,563 | 31,204,290 |
| 38. Net system revenues | 392,255 | 4,500 | 4,500 | 4,500 | 4,500 | 4,500 | 4,500 | 4,500 | 4,500 | 4,500 | 4,500 | 4,500 | 49,500 | 441,775 |
| Application of Net System Revenues | | | | | | | | | | | | | | |
| 39. California Water Fund repayment | 305,765 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 305,765 |
| 40. Revenues used for capital expenditures | 86,490 | 4,500 | 4,500 | 4,500 | 4,500 | 4,500 | 4,500 | 4,500 | 4,500 | 4,500 | 4,500 | 4,500 | 49,500 | 140,490 |

Table 14-10 Operations, Maintenance, Power, and Replacement Costs, by Facility, Composition, and Purpose (Thousands of Dollars)

| Feature | Calendar Year | | | | | | | | | | | | | |
|---|---------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------------|-------------|
| | 1962–2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021–2035 | TOTAL |
| Project Facility | | | | | | | | | | | | | | |
| Feather River facilities | 1,342,073 | 45,911 | 49,276 | 46,133 | 46,964 | 47,719 | 48,138 | 48,317 | 49,236 | 48,686 | 50,184 | 50,386 | 824,294 | 2,697,317 |
| North Bay Aqueduct | 81,759 | 5,166 | 5,674 | 5,567 | 4,325 | 4,415 | 4,944 | 4,947 | 5,026 | 4,955 | 5,092 | 5,097 | 81,475 | 218,442 |
| Delta facilities | 724,840 | 38,504 | 35,716 | 45,293 | 39,763 | 40,402 | 33,766 | 33,892 | 34,536 | 34,150 | 35,201 | 35,343 | 578,190 | 1,709,596 |
| Suisun Marsh | 46,129 | 2,677 | 3,362 | 3,434 | 3,149 | 3,200 | 3,228 | 3,240 | 3,301 | 3,264 | 3,365 | 3,378 | 55,268 | 136,995 |
| South Bay Aqueduct | 328,057 | 10,371 | 14,299 | 13,127 | 11,031 | 11,197 | 13,324 | 13,319 | 13,516 | 13,310 | 13,664 | 13,663 | 216,491 | 685,369 |
| California Aqueduct | | | | | | | | | | | | | | |
| Delta to Edmonston | 3,836,122 | 142,902 | 228,934 | 212,897 | 203,405 | 217,136 | 236,112 | 239,904 | 233,035 | 245,294 | 241,792 | 242,344 | 3,788,193 | 10,068,070 |
| Edmonston to Perris | 3,384,020 | 139,659 | 250,186 | 222,046 | 223,886 | 237,453 | 264,393 | 275,321 | 259,964 | 285,237 | 271,094 | 276,710 | 4,299,665 | 10,389,634 |
| West Branch | (21,135) | 16,324 | 5,462 | 11,049 | 3,764 | 1,040 | (4,423) | (3,990) | (1,567) | (971) | (4,197) | (4,195) | 22,495 | 19,656 |
| Coastal Branch | 270,534 | 13,981 | 18,028 | 14,850 | 16,391 | 16,601 | 18,469 | 18,466 | 18,745 | 18,466 | 18,962 | 18,967 | 301,230 | 763,690 |
| East Branch Enlargement | 104,518 | 6,331 | 6,565 | 6,597 | 6,584 | 6,624 | 6,615 | 6,574 | 6,633 | 6,494 | 6,628 | 6,588 | 99,444 | 276,195 |
| Off-Aqueduct power-generating facilities | 131,771 | 76,310 | 79,342 | 78,692 | 39,413 | 134 | 13 | 13 | 14 | 14 | 14 | 15 | 114 | 405,859 |
| Recreation, planning, and CVP negotiations | 6,030 | 683 | 683 | 683 | 683 | 683 | 683 | 683 | 683 | 683 | 683 | 683 | 10,245 | 23,788 |
| Water quality monitoring | 412,293 | 15,712 | 12,683 | 12,683 | 12,683 | 12,683 | 12,683 | 11,379 | 11,379 | 11,379 | 11,379 | 11,379 | 170,685 | 719,000 |
| Davis-Grunsky Act Program | 12,905 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 9,000 | 28,505 |
| Subtotal | 10,659,916 | 515,131 | 710,810 | 673,651 | 612,641 | 599,887 | 638,545 | 652,665 | 635,101 | 671,561 | 654,461 | 660,958 | 10,456,789 | 28,142,116 |
| Payments to/credits from PG&E under Comprehensive Agreement | (59,848) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | (59,848) |
| Total OMP&R Costs | 10,600,068 | 515,131 | 710,810 | 673,651 | 612,641 | 599,887 | 638,545 | 652,665 | 635,101 | 671,561 | 654,461 | 660,958 | 10,456,789 | 28,082,268 |
| Composition | | | | | | | | | | | | | | |
| Salaries and expenses of headquarters personnel | 3,038,087 | 122,058 | 127,395 | 131,764 | 124,486 | 125,021 | 121,861 | 106,453 | 103,796 | 111,274 | 106,117 | 108,930 | 1,823,597 | 6,150,839 |
| Salaries and expenses of field personnel | 4,254,156 | 155,752 | 163,054 | 169,272 | 160,297 | 162,971 | 158,712 | 185,174 | 180,086 | 193,779 | 184,021 | 189,178 | 3,182,726 | 9,339,178 |
| Pumping power | | | | | | | | | | | | | | |
| Used by pumping plants | 2,625,507 | 178,271 | 406,692 | 349,423 | 350,451 | 381,156 | 438,238 | 442,844 | 429,981 | 449,090 | 447,029 | 445,321 | 6,693,269 | 13,637,272 |
| Produced by generation plants | (505,383) | (17,537) | (65,950) | (55,777) | (62,283) | (69,672) | (80,556) | (82,096) | (79,053) | (82,873) | (82,997) | (82,763) | (1,247,072) | (2,514,012) |
| Payments to/credits from PG&E under Comprehensive Agreement | (59,848) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | (59,848) |
| Off-Aqueduct power generating facilities requirement | 1,355,895 | 76,310 | 79,342 | 78,692 | 39,413 | 134 | 13 | 13 | 14 | 14 | 14 | 15 | 114 | 1,629,983 |
| Oroville-Thermalito insurance premiums | 12,705 | 277 | 277 | 277 | 277 | 277 | 277 | 277 | 277 | 277 | 277 | 277 | 4,155 | 19,907 |
| Less portion of costs incurred during construction | (121,051) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | (121,051) |
| Total OMP&R Costs | 10,600,068 | 515,131 | 710,810 | 673,651 | 612,641 | 599,887 | 638,545 | 652,665 | 635,101 | 671,561 | 654,461 | 660,958 | 10,456,789 | 28,082,268 |
| Project Purpose | | | | | | | | | | | | | | |
| Water supply and power generation | 10,147,539 | 491,327 | 687,006 | 649,847 | 588,837 | 576,083 | 614,741 | 628,861 | 611,297 | 647,757 | 630,657 | 637,154 | 10,099,729 | 27,010,835 |
| Payments to/credits from PG&E under Comprehensive Agreement | (59,848) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | (59,848) |
| Recreation and fish and wildlife enhancement | 200,842 | 11,000 | 11,000 | 11,000 | 11,000 | 11,000 | 11,000 | 11,000 | 11,000 | 11,000 | 11,000 | 11,000 | 165,000 | 486,842 |
| Flood control | 7,073 | 204 | 204 | 204 | 204 | 204 | 204 | 204 | 204 | 204 | 204 | 204 | 3,060 | 12,377 |
| Miscellaneous purposes | | | | | | | | | | | | | | |
| Federal share, San Luis and Delta facilities | 291,557 | 12,000 | 12,000 | 12,000 | 12,000 | 12,000 | 12,000 | 12,000 | 12,000 | 12,000 | 12,000 | 12,000 | 180,000 | 603,557 |
| Other (Davis-Grunsky, drainage, City of Los Angeles) | 12,905 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 9,000 | 28,505 |
| Total OMP&R Costs | 10,600,068 | 515,131 | 710,810 | 673,651 | 612,641 | 599,887 | 638,545 | 652,665 | 635,101 | 671,561 | 654,461 | 660,958 | 10,456,789 | 28,082,268 |

Table 14-11 Annual Debt Service on Bonds Sold through December 31, 2009 (Thousands of Dollars)

| Calendar Year | Series A through Y Water Bonds | | Oroville Revenue Bonds ^a | | Pyramid Project Revenue Bonds ^b | | Alamo Project Revenue Bonds ^b | | Small Hydro Project Revenue Bonds ^b | | Water System Facilities Water System Revenue Bonds ^c | | Subtotal | | Devil Canyon-Castaic Project Revenue Bonds | | Reid Gardner Project Revenue Bonds ^{a,c} | | South Geysers Project Revenue Bonds ^b | | Bottle Rock Project Revenue Bonds ^b | | East Branch Enlargement Project Water System Revenue Bonds ^c | | Coastal Extension Facilities Water System Revenue Bonds | | East Branch Extension Facilities Water System Revenue Bonds ^c | | South Bay Enlargement Facilities Water System Revenue Bonds ^c | | Tehachapi East Afterbay Facilities Water System Revenue Bonds ^c | | Grand Total | |
|------------------|-----------------------------------|----------|--|----------|---|----------|---|----------|---|----------|---|----------|-----------|----------|---|----------|--|----------|---|----------|---|----------|---|----------|---|----------|--|----------|--|----------|--|----------|-------------|----------|
| | Principal | Interest | Principal | Interest | Principal | Interest | Principal | Interest | Principal | Interest | Principal | Interest | Principal | Interest | Principal | Interest | Principal | Interest | Principal | Interest | Principal | Interest | Principal | Interest | Principal | Interest | Principal | Interest | Principal | Interest | Principal | Interest | Principal | Interest |
| 1964 | 0 | 3,333 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3,333 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3,333 | |
| 1965 | 0 | 11,114 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11,114 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11,114 | |
| 1966 | 0 | 18,764 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18,764 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18,764 | |
| 1967 | 0 | 26,911 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26,911 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26,911 | |
| 1968 | 0 | 37,761 | 0 | 3,876 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 41,637 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 41,637 | |
| 1969 | 0 | 47,460 | 0 | 10,448 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 57,908 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 57,908 | |
| 1970 | 0 | 53,290 | 0 | 13,145 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66,435 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66,435 | |
| 1971 | 0 | 63,035 | 0 | 13,145 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 76,180 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 76,180 | |
| 1972 | 0 | 69,149 | 1,260 | 13,112 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,260 | 82,261 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,260 | 82,261 | |
| 1973 | 1,200 | 69,347 | 1,330 | 13,042 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,530 | 82,389 | 0 | 7,708 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,530 | 90,097 | |
| 1974 | 3,000 | 69,533 | 1,400 | 12,969 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4,400 | 82,502 | 0 | 7,708 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4,400 | 90,210 | |
| 1975 | 5,000 | 69,366 | 1,475 | 12,893 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6,475 | 82,259 | 0 | 7,708 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6,475 | 89,967 | |
| 1976 | 7,000 | 69,657 | 1,555 | 12,811 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8,555 | 82,468 | 0 | 7,708 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8,555 | 90,176 | |
| 1977 | 10,200 | 69,298 | 1,635 | 12,727 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11,835 | 82,025 | 0 | 7,708 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11,835 | 89,733 | |
| 1978 | 12,700 | 69,286 | 5,775 | 12,537 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18,475 | 81,823 | 0 | 7,708 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18,475 | 89,531 | |
| 1979 | 13,650 | 68,660 | 11,585 | 12,275 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25,235 | 80,935 | 0 | 7,708 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25,235 | 88,643 | |
| 1980 | 16,050 | 67,941 | 3,265 | 11,739 | 0 | 7,900 | 0 | 0 | 0 | 0 | 0 | 0 | 19,315 | 87,580 | 0 | 7,708 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19,315 | 95,288 | |
| 1981 | 18,050 | 67,078 | 4,885 | 11,444 | 0 | 7,292 | 0 | 0 | 0 | 0 | 0 | 0 | 22,935 | 85,814 | 0 | 7,708 | 0 | 5,312 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22,935 | 98,834 | |
| 1982 | 19,250 | 66,130 | 17,920 | 10,968 | 0 | 7,292 | 0 | 0 | 0 | 0 | 0 | 0 | 37,170 | 84,390 | 0 | 7,708 | 0 | 14,347 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 37,170 | 106,445 | |
| 1983 | 20,520 | 65,111 | 21,110 | 10,147 | 0 | 7,292 | 0 | 2,449 | 0 | 3,727 | 0 | 0 | 41,630 | 88,726 | 900 | 7,708 | 0 | 35,719 | 0 | 4,777 | 0 | 6,017 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 42,530 | 142,947 | |
| 1984 | 21,785 | 64,036 | 10,005 | 9,013 | 640 | 7,292 | 0 | 4,198 | 0 | 3,727 | 0 | 0 | 32,430 | 88,266 | 955 | 7,647 | 0 | 35,719 | 0 | 5,647 | 0 | 10,315 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 33,385 | 147,594 | |
| 1985 | 22,555 | 62,892 | 12,700 | 8,628 | 675 | 7,238 | 0 | 4,198 | 0 | 3,727 | 0 | 0 | 35,930 | 86,683 | 1,010 | 7,583 | 9,425 | 27,209 | 0 | 5,647 | 0 | 10,315 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 46,365 | 137,437 | |
| 1986 | 23,830 | 61,705 | 11,435 | 7,859 | 715 | 7,377 | 0 | 4,263 | 0 | 3,537 | 0 | 0 | 35,980 | 84,741 | 1,070 | 7,515 | 3,805 | 32,882 | 0 | 5,516 | 1,240 | 10,315 | 0 | 4,021 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 42,095 | 144,990 | |
| 1987 | 25,495 | 60,452 | 11,715 | 7,188 | 790 | 7,513 | 265 | 4,329 | 0 | 3,348 | 0 | 4,952 | 38,265 | 87,782 | 1,135 | 7,442 | 4,860 | 32,605 | 0 | 5,386 | 1,305 | 10,253 | 0 | 9,651 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 45,565 | 153,119 | |
| 1988 | 26,770 | 59,120 | 6,685 | 6,664 | 830 | 7,447 | 280 | 4,314 | 345 | 3,348 | 710 | 11,037 | 35,620 | 91,930 | 1,205 | 7,366 | 5,065 | 32,295 | 580 | 5,521 | 1,390 | 10,849 | 995 | 9,875 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 44,855 | 157,836 | |
| 1989 | 28,145 | 57,790 | 33,705 | 5,513 | 875 | 7,378 | 295 | 4,298 | 365 | 3,328 | 1,148 | 14,373 | 64,533 | 92,680 | 1,275 | 7,284 | 7,820 | 27,557 | 709 | 5,646 | 1,565 | 11,592 | 1,078 | 10,104 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 76,980 | 154,863 | |
| 1990 | 29,385 | 56,436 | 10,385 | 4,301 | 930 | 7,305 | 320 | 4,279 | 405 | 3,304 | 1,227 | 19,555 | 42,652 | 95,180 | 1,355 | 7,198 | 6,675 | 29,781 | 761 | 5,596 | 1,678 | 11,491 | 1,134 | 10,048 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 54,255 | 159,294 | |
| 1991 | 30,365 | 55,034 | 12,055 | 3,922 | 980 | 7,227 | 335 | 4,257 | 430 | 3,276 | 2,129 | 27,569 | 46,294 | 101,285 | 1,435 | 7,107 | 7,170 | 29, | | | | | | | | | | | | | | | | |



Chapter 15

SWP Education and Information

The Department of Water Resources and the Association of California Water Agencies launched a statewide public education program, Save Our Water, to promote water conservation.

Save Our Water



Since water is a limited resource and it is important to each of us every day, water conservation is essential. By following these water conservation tips in the home you can help conserve water every day, whether there's a drought or not.

Significant Events in 2009

Inside Home

KITCHEN

- Wash vegetables in container, not under running water.
- Use dishwasher for full loads. Information about water and efficient dishwashers is available at: http://www.cuwcc.org/residential_dishwashers.aspx

BATHROOM

- Install low-flow shower heads.
- Take shorter showers. (Showers can save you about 15 gallons per shower.)
- If you take a bath, fill bathtub less than halfway. (You can save 10-15 gallons per bath.)
- Install a high efficiency (HE) flush toilet (check with your local water agency for current rebate information).
- Install aerators on bathroom faucets. (Most homes built after 1980 have aerators.)
- Turn water off when brushing teeth.

LAUNDRY ROOM

- Use washing machine for full loads.
- Information on washers and current rebates available at: http://www.cuwcc.org/efficient_clothes_washers.aspx

Outside Home

To meet the challenge of California's third consecutive drought year, the Department of Water Resources' (DWR) Public Affairs Office (PAO) promoted water conservation through a sustained multimedia outreach effort. PAO used news releases, exhibits, meetings and media contacts, film, videos, and websites to promote water management and conservation messages reflecting drought conditions.

The State Water Project (SWP) is a major topic every year in PAO activities, especially in outreach to California's news media. The SWP's 2009 allocation was set at 40 percent of contractors' requests, reflecting continued dry conditions and relatively low winter precipitation totals. The 40 percent allocation was up slightly from the 35 percent for 2008.

In February, the Governor proclaimed a state of emergency arising from the drought, which began in 2007. On March 30, DWR provided a comprehensive report to the Governor updating the State's drought conditions and strategies for coping with the drought. In April, DWR and the Association of California Water Agencies (ACWA) launched a new statewide public education program, *Save Our Water*, to promote water conservation.

Drought news predominated in DWR's multimedia outreach during 2009. DWR sponsored and promoted a series of regional drought briefings as well as drought workshops with the Bureau of Reclamation (Reclamation) and a California-Mexico drought summit.

California's emerging climate change realities were reflected in a documentary that DWR created in partnership with the Water Education Foundation.

Tips on Leaks

Lots of water can be lost by little leaks.

A small drip can waste 70 gallons of water in a day and more than 1,000 gallons a day can pour through a steady leak of one-sixteenth inch in size. Fix leaky faucets and toilets right away. If you don't, not only is water dripping, energy is also being wasted. And a leak can be a major water waster, always fix any leak as soon as possible.

PIPE LEAKS

To detect unseen leaks, read your water meter. Don't run any water for one hour, then read your water meter again. If the meter has moved, you have a leak.

FAUCET LEAKS

Most leaks, besides toilet leaks, are in the faucets, and most are mainly due to worn washers. If you're doing any plumbing work when plumbing fixtures are replaced, be sure to replace the washers. Check your tap a couple of times a year to see if all the faucets are working properly.

TOILET LEAKS

Put food coloring in your toilet tank and wait for 20 minutes. If it seeps into the toilet bowl, you have a leak. Many toilet leaks can be fixed with simple tools and a do-it-yourself manual.

The Department of Water Resources' (DWR) Public Affairs Office (PAO) operates as an information conduit between DWR and the public, usually involving the news media. PAO provides information describing DWR's mission, programs, and activities. Written communications, websites, and publications are often used. So, too, are graphics, video, artwork, photography, exhibits, tours, visitors center displays, special events, community outreach, and meetings. In 2009, DWR added Facebook to its social media outreach portfolio.

News Topics

Selected highlights below provide examples of PAO 2009 outreach about DWR's water policy programs and activities.

Snow Surveys

DWR conducts five monthly Sierra snow surveys starting in late December or early January and continuing until late April or early May. By precisely studying snow depth and water content, water analysts assess the snowpack's potential for producing snowmelt runoff for water supply. Sierra snowpack provides about one-third of California's annual water supply.

DWR encourages media coverage of its monthly snow surveys to help educate the public about snowpack conditions and water supply prospects. News media outlets closely monitor the surveys, especially during droughts.

On March 30, DWR conducted the final snow survey of the season, measuring snowpack water content at 66 percent of average, statewide. Moreover, water storage volumes at that time in California's major reservoirs were low. Lake Oroville, chief storage reservoir for the State Water Project (SWP), registered at 58 percent of capacity.

SWP Allocations

DWR news releases closely documented SWP allocations and explained the

hydrologic realities underlying delivery fluctuations. SWP deliveries during 2009 reflected the continuing dry conditions. After late season snow and rainfall, a projected 30 percent allocation on May 20 was raised to a final allocation of 40 percent. SWP deliveries in 2008 were 35 percent. They had been 60 percent in 2007, the initial year of the drought. The most recent 100 percent allocation occurred in 2006.

Drought Activities: Sampling of Outreach

Pursuant to the Governor's February proclamation of a state of emergency from the continuing drought, DWR intensified its drought leadership activities, providing information to the public and technical assistance to water agencies. On March 30, DWR provided the Governor with a comprehensive report on drought conditions and strategies, *California's Drought: Water Conditions and Strategies to Reduce Impacts*.

Public education about water conservation increased in April when DWR and the Association of California Water Agencies (ACWA) jointly sponsored and initiated a new statewide conservation program called *Save Our Water*. This campaign educates the public about California's ongoing water supply challenges and promotes water conservation through public service announcements, advertising, radio, educational outreach, and a comprehensive website.

During 2009, DWR helped many water agencies develop and strengthen water conservation efforts. In the spring, DWR and the Bureau of Reclamation (Reclamation) conducted major workshops to help urban water agencies address dry conditions. The workshops were held March 16 in San Jose, March 18 in Santa Rosa, and March 23 in Chino.

DWR conducted and promoted drought workshops in San Diego on June 30, Ukiah on July 29, Santa Rosa on July 30, and Bakersfield on August 19. A special international drought conference for leaders from Mexico and California was held in San Diego on March 26 and 27, drawing representatives from four U.S. states and six Mexican states.

During May, DWR observed Water Awareness Month. This annual tradition began during the 1987–1992 statewide drought, as a joint conservation effort with ACWA. DWR's first documented Water Awareness Month activities occurred in 1989.

DWR's Film/Video unit produced a 30-second public service announcement encouraging water conservation. The HDTV spot was made available in both Spanish and English for use by participating California water agencies.

On September 1, DWR Director Lester Snow and ACWA Executive Director Tim Quinn joined in proclaiming Save Our Water Day at the California State Fair, where a special DWR water conservation exhibit was on display.

SWP Publications

About 40 brochures are maintained in a series describing the SWP, its mission, and facilities. They are periodically issued in updated versions and distributed statewide to educate the public about the SWP. In 2009,

the revised brochures included *State Water Project Recreation Facilities* and *Lake Oroville Recreation*. The *Save Our Water* brochure and poster were also revised.

E-News

On weekdays, PAO distributes electronic compilations of news articles and commentaries on water-related issues. These online "news clips" inform DWR managers and staff of water issues relevant to DWR and its programs.

DWR NEWS/People

This magazine provides articles about DWR's programs and employees. It is available in print and online editions.

The Winter 2008–2009 magazine featured articles titled: *Global Positioning System Technology Helps DWR Keep Track of Subsidence*; *Crunching the Water Numbers for California's People, Farms, and Economy*; and *Keeping California's Dams Safe is Vital Mission of DSOD*.

The Spring/Summer 2009 issue featured a major article describing California's drought and DWR's drought activities, a report on San Joaquin River restoration, and an update on the National Levee Safety Program.

The magazine's Fall 2009 edition focused on the Delta Habitat Conservation and Conveyance Program addressing ecosystem and water supply reliability issues in the Delta. This program is a partnership linking DWR and Reclamation, with funding and input from State and federal water contractors. The fall edition also noted the 80th anniversary of California's Dam Safety Program, spotlighting the expert work of DWR's Division of Safety of Dams (DSOD).

Climate Change Activities

In April, DWR released a mini-documentary film entitled *A Climate of Change: Water*

Adaptation Strategies. Produced by PAO's Film/Video Unit and developed in partnership with the Water Education Foundation, the video vividly describes California's changing climate and what climate change means for the State's water supply. Current climate science is applied, along with insights by State, federal, and academic experts. The film focuses on California's special weather patterns, specific model projections, and proposed adaptation strategies.

DWR Tours Program

During 2009, DWR welcomed 17 foreign tours with 129 visitors to SWP facilities. There were also domestic and school tours of the SWP. The San Joaquin Field Division welcomed three bus tours, while the Delta Field Division hosted 17 bus tours. The Oroville Field Division recorded 141 tour groups, with 3,971 participants. The Vista del Lago Visitors Center tallied 124 tour groups, totaling 4,423 tour participants.

Tour groups came from throughout the United States and 14 foreign countries: Armenia, Australia, Azerbaijan, China, Georgia, Israel, Japan, Moldova, the Netherlands, Russia, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan.

Delta Tours for DWR employees, as part of the DWR Training Program, continued with three Delta tours and an additional 21 van tours of the Delta and Oroville. Figure 15-1 shows the SWP visitors center locations.

Special Events

On September 25, DWR promoted a ribbon-cutting ceremony to open a new Lake Oroville low-water boat launch ramp at the Bidwell Canyon Marina. The new ramp gives boaters improved access to the lake when surface levels drop below 705 feet. The lake has declined to that stage during five drought periods since Lake Oroville was initially filled in the late 1960s.

Community Relations and Recreation Safety

To connect with communities through water recreation, education, and safety, PAO administers an annual legislatively-mandated Lakes and Reservoirs Appreciation Week, which was designated July 1–7 in 2009. This observation encourages Californians to use waterways safely and encourages nonpolluting recreational ways.

Water safety was the focus of DWR's May 30 participation at the Patterson Apricot Fiesta.

DWR partnered with communities to create and run nine Aquatic Adventure Camps throughout the summer months, teaching water safety to youths, especially youth from economically challenged communities, and those who would most benefit from positive youth development. The camps utilized facilities at Lake Oroville, Lake Perris, Castaic Lake, and Lake del Valle on the SWP.

DWR is a cosponsor with other groups and volunteers at major "Catch A Special Thrill" (C.A.S.T.) events for young people with special needs. During 2009, C.A.S.T. events were held on June 13 at Lake del Valle, September 12 at Lake Oroville, September 19 at Lake Perris, October 3 at Castaic Lake, and October 17 at Silverwood Lake.

DWR staff also participated in the annual Salmon Festival in September in Oroville.

School Education Program

The School Education Program's goal is to provide students and educators with a statewide perspective on water issues, such as conservation, conveyance systems, and the water cycle. PAO staff develops and promotes high-quality materials and provides them free of charge to schools,

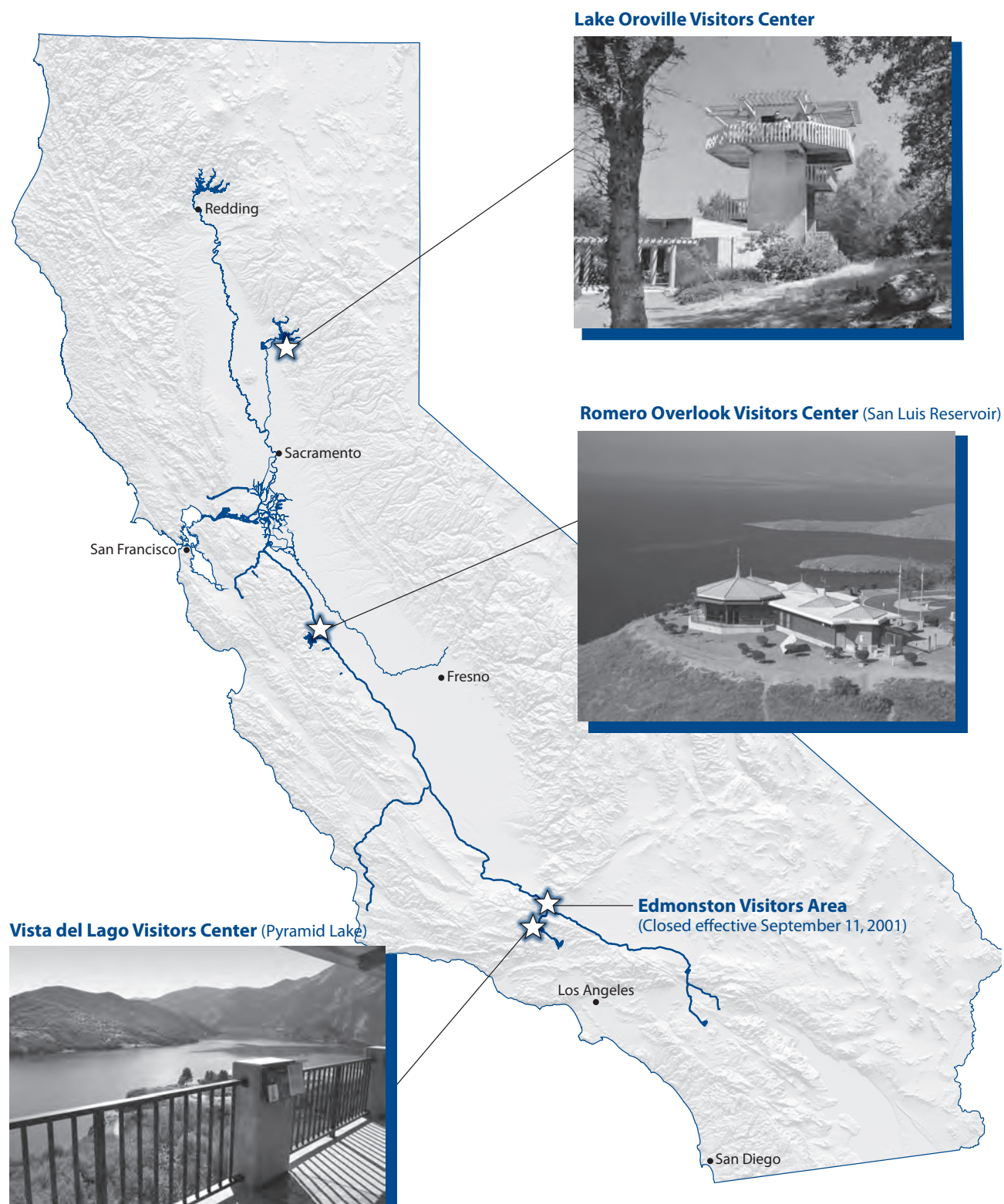


Figure 15-1 Visitors Centers on the SWP

educators, and water districts. Program achievements for 2009 include the following.

Public Events and Outreach

In April, PAO staff provided a display of DWR's Interactive Children's Exhibits at Get WET, a Reclamation event, and the Urban Creeks Council's Creek Week event, both held in Sacramento.

PAO staff also assisted at DWR booths at the International Sportsmen's Expo, Sacramento, in January and the California State Fair, which ran for three weeks in August and September.

Publications and Materials

Additional program achievements for 2009 include providing curriculum materials and children's videos to California teachers and water agencies through the *Water Facts and Fun* online ordering catalog and promotional events. In order to provide materials, the following items were purchased or reprinted:

- 15,000 *California's Amazing Delta* book covers;
- 38,000 *California's Amazing Delta* bookmarks;
- 15,000 *California Water Works and Why It Does* booklets for students;
- 4,500 *Captain Hydro* teacher guides;
- 15,000 *Captain Hydro* student workbooks;
- 5,000 *KIDS: Discover Storm Water* student activity booklets;
- 5,000 *Water and Me* student activity booklets;
- 5,000 hamburger activity sheets for students; and
- 500 *Project WET* (Water Education for Teachers) books, which were provided to pre service teachers who participated in Project WET training workshops.

Collaboration and Partnerships

Whenever possible, DWR's School Education Program seeks to partner with other entities with similar interests and goals to pool resources for educating California's youth on the importance of our water resources. The following collaborative efforts occurred in 2009:

- facilitated DWR's Water Education Committee meeting June 3 and 4 in Southern California, hosted by Eastern Municipal Water District, Elsinore Valley Municipal Water District, The Metropolitan Water District of Southern California, and Rancho California Water District;
- facilitated DWR's Water Education Committee meeting September 30 and October 1 in Stockton, hosted by the Stockton Area Water Suppliers;
- participated on the Project WET Advisory Committee and the California Environmental Education Interagency Network (CEEIN) Committee; and
- participated on the Creek Week Planning Committee, providing event activity passports, artwork for a poster, brochures, and a bookmark for the Creek Week Celebration event.

Collaborative efforts also included providing support for the following:

- the Environmentality Campaign for fifth-grade students, in conjunction with the State of California and the Walt Disney Corporation;
- the California Department of Education's California Regional Environmental Education Community (CREEC) Network; and
- the Delta Studies Institute for teachers, cosponsored with the San Joaquin County Office of Education.

Glossary

This glossary contains terms used in the text of Bulletin 132-10 as well as additional terms related to water resources.

A

abundance The number of organisms of a particular kind in a population. (See also, abundance index.)

abundance index (fisheries) A relative measure of the weight or number of fish in a stock, a segment of the stock (e.g. the spawners), or an area. Often available in time series, the information is collected through scientific surveys or inferred from fishery data.

acre-foot The volume of water that would cover one acre to a depth of one foot; equal to 43,560 cubic feet or 325,851 gallons.

adaptive management The process of improving management effectiveness by learning from the results of carefully designed decisions or experiments.

adipose fin A small fleshy fin with no rays on the topside of a fish located between the fin on the back and the tail fin.

afterbay A storage reservoir downstream of a power plant or large reservoir that regulates fluctuating discharges from a hydroelectric power plant or a pumping plant.

agricultural drainage (1) The process of directing excess water away from root zones by natural or artificial means, such as by using a system of drains placed below ground surface level; also called subsurface drainage; (2) the water drained away from irrigated farmland.

alluvium Unconsolidated soil strata deposited over time by flowing water.

anadromous Fish that live the majority of their life cycle in the sea and return to freshwater streams to spawn.

aquifer A geologic formation that stores water underground (called groundwater), especially one that yields significant quantities of water to wells or springs.

arid Describes a climate or region in which precipitation is so deficient in quantity or occurs so infrequently that intensive agricultural production is not possible without irrigation.

artificial recharge The addition of surface water to a groundwater basin by human activity, such as putting surface water into spreading basins.

average annual runoff The average value of annual runoff volume calculated for a selected period of record, at a specified location, such as a dam or stream gauge.

average year water demand Demand for water under average hydrologic conditions for a defined level of development.

B

balanced water conditions These exist when upstream reservoir storage releases, plus other inflows, approximately equal the water supply needed to (1) satisfy Sacramento Valley and Sacramento-San Joaquin Delta in-basin needs, including Delta water quality requirements, and (2) meet export needs. DWR and Reclamation jointly decide when balanced or excess water conditions exist.

beneficial use Water quality beneficial use categories for water are designated by State law. Beneficial uses of the waters of the State that may be protected against water quality degradation include, but are not limited to, domestic, municipal, agricultural, and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves.

benthic organisms Aquatic animals without backbones that dwell on or in the bottom sediments of fresh or salt water.

biological assessment A document prepared as part of the Endangered Species Act, Section 7 process to determine whether a proposed major construction activity under the authority of a federal action agency is likely to adversely affect listed species, proposed species, or designated critical habitat.

biological opinion A document required by the Endangered Species Act stating the opinion of the U.S. Fish and Wildlife Service or National Marine Fisheries Service on whether or not a federal action is likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat.

biota Living organisms of a region, as in a stream or other body of water.

brackish water Water containing dissolved minerals in amounts that exceed normally acceptable standards for municipal, domestic, and irrigation uses. Considerably less saline than sea water.

bromide A salt which naturally occurs in small quantities in sea water; a compound of bromine.

Burns-Porter Act (California Water Code Section 12930 et seq.) Formally known as the California Water Resources Development Bond Act, this act passed the Legislature in 1959 and was approved by voters in 1960. It provided initial funding of \$1.75 billion in general obligation bonds and authorized construction of the State Water Project facilities.

bypass As part of a flood management system, a natural overflow area or channel that allows excessive floodwaters to flow or be diverted from a main river channel to prevent water from overflowing the main river channel.

C

CALFED Bay-Delta Program A federal and State multiagency program the goals of which are to develop and implement a long-term comprehensive plan that will restore ecological health and improve water management in the Bay-Delta system.

California Data Exchange Center (CDEC) CDEC installs, maintains, and operates an extensive hydrologic data collection network including automatic snow reporting gauges for the DWR Cooperative Snow Surveys Program and precipitation and river stage sensors for flood forecasting. CDEC provides a centralized location to store and process real-time hydrologic information gathered cooperatively throughout the State.

California Irrigation Management Information System (CIMIS) A network of automated weather stations that are owned and operated cooperatively between the DWR and local agencies. The stations are installed in most of the agricultural and urban areas of the State and provide farm and large landscape irrigation managers and researchers with “real-time” weather data to estimate crop and landscape evapotranspiration rates and make irrigation management decisions.

California Water Resources Simulation Model (CALSIM) A computer model that simulates operations of the SWP and CVP water delivery systems. CALSIM II is a planning tool that was jointly developed by DWR and Reclamation. The model’s inputs include hydrologic data for specified study planning years, water demands, infrastructure and regulatory change, and other factors. Outputs include deliveries to water contractors, river flows, reservoir changes, Delta hydrologic parameters, and other data.

Central Valley Project deliveries The volume of water imported to a given area through the Central Valley Project.

climate change Any significant change in the measures of climate lasting for an extended period of time. This includes major changes in temperature, precipitation, or wind patterns, among others, that occur over several decades or longer.

coded wire tag A small piece of stainless steel wire injected into the snout of juvenile salmon and steelhead. Each tag is etched with a binary code that identifies a fish release group.

conjunctive use Application of surface and groundwater to meet the demand for a beneficial use. Coordinated and planned management of both surface and groundwater resources in order to maximize the efficient use of the resource; that is, the planned and managed operation of a groundwater basin and a surface water storage system combined through a coordinated conveyance infrastructure. Water is stored in the groundwater basin for later planned use by intentionally recharging the basin during years of above-average surface water supply.

conservation facilities Reservoir facilities which store water and make it available for later use.

consultation The process required of a federal agency under Section 7 of the Endangered Species Act when any activity authorized, carried out, or conducted by that agency may affect a listed species or designated critical habitat; consultation is with the U.S. Fish and Wildlife Service or National Marine Fisheries Service and may be either informal or formal.

conveyance Provides for the movement of water and includes the use of natural watercourses and constructed facilities including open channels, pipelines, diversions, fish screens, distribution systems, and pump lifts.

conveyance facilities Canals, pipelines, pump lifts, ditches, etc., used to move water from one area to another.

D

Davis-Grunsky Act Authorized in 1960 as part of the Burns-Porter Act, this act provides construction loans for local domestic water projects and agricultural water conservation projects.

Decision 1485 operating criteria The standards for operating the CVP and SWP under Water Right Decision 1485 for the Sacramento-San Joaquin Delta and Suisun Marsh, adopted by the State Water Resources Control Board in August 1978.

Delta outflow Freshwater outflow from the Sacramento-San Joaquin Delta to protect the beneficial uses within the Delta from the incursion of saline water.

Delta outflow index A calculated approximation of the seaward freshwater outflow as it passes Chipps Island near Pittsburg, beyond the confluence of the Sacramento and San Joaquin rivers.

desalting A process to reduce the salt concentration of sea water or brackish water.

discount rate The interest rate used to calculate the present value of future benefits and future costs or to convert benefits and costs to a common time basis.

dissolved organic compounds Carbon-based substances dissolved in water.

dissolved oxygen The amount of oxygen dissolved in water or wastewater, usually expressed in milligrams per liter, parts per million, or percent of saturation.

distinct population segment A subdivision of a species that is treated as a species for purposes of listing under the Endangered Species Act. The smallest division of a taxonomic species that can be protected under the Endangered Species Act.

drainage area The area of land from which water drains into a river; for example, the Sacramento River Basin, in which all land area drains into the Sacramento River. Also called a watershed, drainage basin, or river basin.

drought preparedness The magnitude and probability of economic, social, or environmental consequences that would occur as a result of a sustained drought under a given study plan.

drought condition Hydrologic conditions during a defined period, greater than one dry year, when precipitation and runoff are much less than average.

drought year supply The average annual supply of a water development system during a defined drought period.

Delta Simulation Model 2 (DSM2) A hydrodynamic and water quality simulation model used to simulate water quality conditions in the Sacramento-San Joaquin Delta. The model is frequently used to evaluate potential changes in Delta conditions (salinity, flow, and water level) associated with changes in flow patterns in the Delta.

E

ecosystem restoration The activity of improving the condition of natural landscapes and biotic communities.

effluent Wastewater or other liquid, treated or in its natural state, flowing from a treatment plant or process.

electrical conductivity The measure of the ability of water to conduct an electrical current, the magnitude of which depends on the dissolved mineral content of the water.

endangered species An animal or plant species in danger of extinction throughout all or a significant portion of its range.

entrainment The unintended diversion of fish (or other aquatic organisms) into an unsafe passage route. The incidental trapping of any life stage of fish within waterways or structures that carry water being diverted for use elsewhere. Fish are considered “entrained” when they enter a diversion point, which for the SWP is Clifton Court Forebay.

environmental impact report A report done to analyze project or program impacts on a variety of resources under the California Environmental Quality Act.

environmental impact statement A report done to analyze project or program impacts on a variety of resources under National Environmental Policy Act.

environmental water The water for wetlands, for the instream flow in a major river or in the Bay-Delta, or for a designated wild and scenic river.

escapement The portion of an anadromous fish population that escapes commercial and recreational fisheries and reaches its freshwater spawning grounds.

estuary A semi-closed coastal body of water where the lower course of a river enters the sea, influenced by tidal action where the tide meets the river flow, resulting in brackish water.

evapotranspiration The amount of water transpired by plants, retained in plant tissues, and evaporated from plant tissues and surrounding soil surfaces. (See also, reference evapotranspiration.)

excess water conditions Periods when it is agreed that releases from upstream reservoirs plus unregulated flow exceeds Sacramento Valley in-basin uses plus exports. DWR and Reclamation jointly decide when balanced or excess water conditions exist. During excess water conditions, sufficient water is available to meet all beneficial needs and the CVP and SWP are not required to supplement the supply with water from reservoir storage.

export An amount of water transported from one source or location to another.

F

firm yield The maximum annual supply of a water development project under drought conditions, for some specified level of demand.

floodplain A strip of relatively level land bordering a stream or river that is often inundated during times of high water.

forages Food for animals, especially crops grown to feed horses, cattle, and other livestock.

forebay A reservoir at the intake of a pumping plant or power plant to stabilize water levels; also a storage basin for regulating water for percolation into groundwater basins.

fork length A measurement used frequently for fish length when the tail has a fork shape; projected straight distance between the tip of the snout and the fork of the tail.

freeboard The height of the physical top of a levee above a specified water surface elevation. This serves as a factor of safety for containing water in the stream or reservoir without overtopping the levee or dam.

fry Young, recently hatched fish that are able to swim and catch their own food.

G

greenhouse gas emissions Also referred to as carbon intensity or carbon footprint. Gases that trap heat in the atmosphere are called greenhouse gases. These include carbon dioxide, methane, nitrous oxide, and fluorinated gases.

grilse A term that generally refers to young adult salmonids of a certain length and age. Grilse are often 55-65 centimeters (22-26 inches) in length. They are assumed to be two years old, and adults are assumed to be age three and older.

groundwater Water located beneath the land surface and fills the pore spaces of the alluvium, soil, or rock formation in which it is situated. It excludes soil moisture, which refers to water held by capillary action in the upper unsaturated zones of soil or rock.

groundwater bank Groundwater banking refers to the practice of recharging specific amounts of water in a groundwater basin during wet or above-average years, which can later be withdrawn and used by the depositing entity.

groundwater basin An alluvial aquifer or a stacked series of alluvial aquifers with reasonably well-defined boundaries in a lateral direction and having a definable bottom.

groundwater recharge The natural or intentional infiltration of surface water into the zone of saturation (i.e., into groundwater).

groundwater storage capacity The volume of void space that can be occupied by water in a given volume of a formation, aquifer, or groundwater basin.

groundwater table The upper surface of the zone of saturation in an unconfined aquifer.

H

habitat The place or environment where a plant or animal naturally lives and grows (a group of particular environmental conditions).

habitat conservation plan A plan that outlines ways of maintaining, enhancing, and protecting a given habitat type needed to protect species; usually includes measures to minimize impacts, and may include provisions for permanently protecting land, restoring habitat, and relocating plants or animals to another area. Required before a federal Endangered Species Act incidental take permit may be issued.

halophyte A plant capable of growing in salty soil.

hydraulic barrier (1) A barrier created by injecting fresh water to control seawater intrusion in an aquifer, or created by water injection to control migration of contaminants in an aquifer. (2) A barrier developed in the estuary by release of fresh water from upstream reservoirs to prevent intrusion of sea water into the body of fresh water.

hydrologic balance An accounting of all water inflow to, water outflow from, and changes in water storage within a hydrologic unit over a specified period of time.

hydrologic basin Where, conceptually, any drop of water that falls in the basin will flow to a stream or groundwater basin within it. It is a larger set of which a subset is the groundwater basin which can be within a hydrologic basin. DWR's hydrologic regions are collections of the larger hydrologic basins.

hydrologic region A geographical division of the State based on the local hydrologic basins. There are 10 hydrologic regions in California.

hydrology The science dealing with the occurrence, circulation, distribution, and properties of the waters of the earth and its atmosphere.

I

in-lieu recharge The practice of providing surplus surface water to historic groundwater users, thereby leaving groundwater in storage for later use.

ion exchange Processes of purification, separation, and decontamination of aqueous and other ion-containing solutions with solid ion exchangers such as sodium carbonate used for water softening.

instream use Use of water within its natural watercourse as specified in an agreement, water rights permit, etc. For example, the use of water for navigation, recreation, fish and wildlife, aesthetics, and scenic enjoyment.

integrated regional water management A comprehensive approach for determining the appropriate mix of demand and supply management options to provide long-term, reliable water supply at the lowest reasonable cost and with the highest possible benefits to customers, economic development, environmental quality, and other social objectives.

J

joint points of diversion The ability of the SWP to use Jones Pumping Plant as a point of diversion and the CVP to use Banks Pumping Plant as a point of diversion. The SWP and CVP may use one another's diversion facilities under certain conditions.

joint powers agreement An agreement entered into by two or more public agencies that allows them to jointly exercise any power common to the contracting parties. This is defined in Chapter 5 (commencing with Section 6500) of Division 7 of Title 1 of the California Government Code.

joint-use facilities Those portions of the SWP which serve both SWP and CVP functions, and in which both State and federal agencies participate in the construction and use; specifically, the San Luis complex and Reaches 3, 4, 5, 6, and 7 of the California Aqueduct.

jurisdictional dam Artificial barriers, together with appurtenant works, which are 25 feet or more in height or have an impounding capacity of 50 acre-feet or more, which are regulated by the Division of Safety of Dams.

L

land subsidence The lowering of the natural land surface in response to earth movements, lowering of fluid pressure or groundwater level, consolidation of underlying soils, removal of underlying supporting materials by mining (oil and gas extraction), compaction caused by wetting, or oxidation of organic matter in soils (peat soil being converted to gas).

legal Delta The legal geographical boundaries of the Sacramento-San Joaquin Delta, as established by the Delta Protection Act of 1959, and as defined in California Water Code Section 12220.

listed species A species, subspecies, or distinct population segment that has been added to the federal list of endangered and threatened wildlife and plants. The term also applies to a species or subspecies added to the California list of endangered or threatened plants and animals.

M

maximum contaminant level The highest drinking water contaminant concentration allowed under federal and State Safe Drinking Water Act regulations.

mitigation (1) An action or set of actions designed to avoid, minimize, reduce, eliminate, or compensate for adverse environmental impacts due to an agency activity or program. (2) Reduction of human activities that affect global climate change; includes strategies to reduce greenhouse gas emissions.

Monterey Agreement An agreement executed in December 1994 among DWR and the SWP water contractors to address fundamental contract issues by amending the long-term water supply contracts.

Monterey Amendments Amendments to the long-term water supply contracts for the SWP entered into by DWR and most (27 of 29) of the SWP water contractors in 1995 and 1996 as implementation of the terms of the Monterey Agreement.

multipurpose project A project, usually a reservoir, designed to serve more than one purpose, and whose costs are normally allocated among the different functions it provides. For example, a project that provides water supply, flood control, and generates hydroelectricity.

N

natural community conservation planning (NCCP) A process that promotes multispecies and multihabitat management and conservation

through cooperative efforts among public agencies, private landowners, and other interests within a plan area. It provides a framework for minimizing impacts on plant communities and wildlife from proposed development projects.

natural recharge Natural replenishment of an aquifer generally from snowmelt and runoff through seepage from the surface.

net groundwater The amount of groundwater extraction in excess of deep percolation.

nonreimbursable costs The part of project costs allocated to general statewide or national beneficial purposes and funded from general revenues, rather than by water users.

normalized demand The process of adjusting actual water use in a given year to account for unusual events such as dry weather conditions, government price support programs for agriculture, rationing programs, or other unusual conditions.

O

operational yield An optimal amount of groundwater that should be withdrawn from an aquifer system or a groundwater basin each year. It is a dynamic quantity that must be determined from a set of alternative groundwater management decisions subject to goals, objectives, and constraints of the management plan.

Operations Criteria and Plan (OCAP) (1) The document titled, “Long-Term Central Valley Project Operations Criteria and Plan,” that serves as a baseline description of the facilities and operating environment of the CVP and SWP and identifies factors influencing the physical and institutional conditions and decision-making process under which the project currently operates. Regulatory and legal requirements are explained and alternative operating models and strategies described. (2) The document titled, “Central Valley Project Operations Criteria and Plan” (CVP-OCAP, 2004), that describes the laws, regulations, and other criteria applicable to operations of the CVP that were in effect from 1991 through 2003.

Operations Criteria and Plan biological opinion (1) The document titled, “Biological Opinion and Conference Opinion on the Long-Term Operations of the Central Valley Project and the State Water Project” (NOAA Fisheries, 2009). (2) The December 15, 2008, memorandum from USFWS to Reclamation that comprises the USFWS biological opinion on the coordinated operations of the CVP and SWP.

otolith Ear bone of a fish. Otoliths often show seasonal or annual rings that can be used to determine age.

outflow The amount of applied water and conveyance water leaving the service area. Also conveyance outflow.

P

pelagic Inhabiting the water column as opposed to being associated with the bottom; generally occurring anywhere from the water's surface down to, but not including, the bottom.

pelagic fish Fish that live in open water, often near the surface.

perched groundwater Groundwater supported by a zone of material of low permeability located above an underlying main body of groundwater.

perennial yield The maximum quantity of water that can be annually withdrawn from a groundwater basin over a long period of time without developing an overdraft condition.

permeability The capability of soil or other geologic formations to transmit water.

phytoplankton Minute plants, such as algae, that live suspended in bodies of water and that drift about because they cannot move by themselves or because they are too small or too weak to swim effectively against a current.

precipitation A deposit on the earth of hail, rain, mist, sleet, or snow. It is the common process by which atmospheric water becomes surface or subsurface water.

project yield The water supply attributed to all features of a project, including integrated operation.

proposal solicitation package (PSP) As part of the formal solicitation for grant applications, a PSP provides detailed instructions on the mechanics of submitting proposals and specific information on submittal requirements.

public trust doctrine A legal doctrine recognizing public rights in the beds, banks, and waters of navigable waterways, and the State's power and duty to exercise continued supervision over them as trustee for the benefit of the people.

pump lift (1) The vertical distance that a pump will raise water. (2) The distance between the groundwater table and the overlying land surface.

pumped storage project A hydroelectric power plant and reservoir system using an arrangement whereby water released for generating energy during peak load periods is stored and pumped back into the upper reservoir, usually during periods of reduced power demand.

pumping-generating plant A plant which can either pump water or generate electricity, depending on the direction of water flow.

punch list A list of tasks or “to-do” items necessary for the completion of a construction project.

R

radial gates Gates used to control the flow of water into or from a reservoir, canal, pipeline, or through a channel. Each gate can close under its own weight and is operated independently by remote control.

radio-telemetry Automatic measurement and transmission of data from remote sources via radio to a receiving station for recording and analysis.

rate structure Designates the rate basis for cost recovery (e.g., flat, uniform, tiered, etc.). Block/Tiered rates are assumed to provide cost signals to consumers. Costs can include capital, operation and maintenance, financing, environmental compliance (documentation, permitting, and mitigation), etc.

reach On the California Aqueduct, a specific segment of the canal, identified by a number, which is the smallest unit of the SWP identified in water supply contracts for cost allocation and repayment purposes.

rearing Refers to the amount of time that juvenile fish spend feeding in nursery areas of rivers, lakes, streams, and estuaries before migration.

reasonable and prudent alternatives Alternative actions that can be implemented in a manner consistent with the intended purpose and scope of a project, are economically and technologically feasible, and would avoid the likelihood of jeopardizing the continued existence of listed species or resulting in the destruction or adverse modification of critical habitat.

recharge Water added to an aquifer or the process of adding water to an aquifer. Groundwater recharge occurs either naturally as the net gain from precipitation or artificially as the result of human influence.

recharge basin A surface facility constructed to infiltrate surface water into a groundwater basin.

recreation Water-dependent recreation activities that are consumptive (e.g., parks), flat-water (e.g., boating), or flow-based (e.g., whitewater rafting).

recycled water (1) The application of treated water/reclaimed water to meet a beneficial use, supplanting a potable or potentially potable supply. (2) Treated municipal, industrial, or agricultural wastewater to produce water that can be reused.

redd A shallow nest of fish eggs covered with gravel in a streambed.

reference evapotranspiration (ET_0) The evapotranspiration rate from an extended surface of 3 to 6 inch (8 to 15 centimeter) tall green grass cover of uniform height, actively growing, completely shading the ground, and not short on water (the reference ET reported by CIMIS).

reliability planning Water reliability management planning is done by comparing the costs of taking actions to maintain or increase reliability to the costs of accepting less reliability. On this basis, accepting of the costs of adverse effects of less than 100 percent reliability could be a legitimate planning decision. Providing full water supply to meet 100 percent of projected future water demand is not the planning goal, rather, the goal is to find the justified level of reliability.

reoperation See system reoperation.

repayment reach Aqueduct reaches are delineated for the purpose of making project repayment as equitable as possible. The reaches are generally numbered consecutively from the Delta with Reach 1 being first. Repayment reaches vary greatly in length. (See also, reach.)

required instream flow The amount of water required for instream use by agreement, water rights permit, or State/federal acts.

reused water The application of previously used water to meet a beneficial use, whether treated or not prior to the subsequent use (cf. recycled water).

return flow The portion of withdrawn water not consumed by evapotranspiration or system losses which returns to its source or to another body of water.

reverse osmosis A method to remove salts and other constituents from water by forcing water through membranes.

riparian area The area of land adjacent to a stream, lake, or wetland with vegetation that, due to the presence of water, is distinctly different from the vegetation of adjacent upland areas. Riparian areas provide important wildlife habitat (including fish habitat, when sufficient to overhang, extend into, or fall into the water).

riparian [water] right A right to use surface water, such right derived from the fact that the land in question abuts the banks of a stream or other

water source (lake or pond). These rights are senior to most appropriative water rights.

run (of fish) A group of fish of the same species whose upstream spawning migration timing is associated with the seasons, e.g., fall, spring, summer, and winter runs. Members of a run may interbreed with fish of another run.

runoff The volume of surface flow from an area during a specified period. Natural runoff is the portion of precipitation that runs off the land and makes up the natural flow in rivers. Incidental runoff is the portion of precipitation that would have been used by natural vegetation but now contributes to runoff. This is a result of roads, paved areas, building roofs, land drainage systems, fields developed for irrigation, and other changes in land use.

S

saline intrusion The movement of salt water into a body of fresh water. It can occur in either surface water or groundwater bodies.

salinity Generally, the concentration of mineral salts dissolved in water. Salinity may be expressed in terms of a concentration, weight (total dissolved solids), electrical conductivity, or osmotic pressure. When describing salinity influenced by seawater, salinity often refers to the concentration of chlorides in the water. (See also, total dissolved solids.)

salmonid A fish species belonging to the salmon family, including salmon and trout.

salt-water barrier A physical facility or method of operation designed to prevent the intrusion of saltwater into a body of fresh water.

salvage (fish) At the SWP and CVP fish protective facilities, fish are removed from export water, transported, and released away from the influence of the water diversion facilities.

sediment Soil or mineral material transported by water and deposited in streams or other bodies of water.

seepage The gradual movement of water into, through, or from a porous medium. Also, the infiltration of water into the soil from canals, ditches, laterals, watercourses, reservoirs, storage facilities, or other bodies of water or from a field.

service area The geographic area served by a water agency.

smolt A juvenile salmonid fish that has assumed the silvery color of the adult and, while migrating toward the ocean, is undergoing physiological changes that allow it to live in saltwater.

snowpack The annual accumulation of snow in mountain areas.

soluble minerals Naturally occurring substances capable of being dissolved.

special status species Plants or animals legally protected under either the federal or California Endangered Species Act or the California Fish and Game Code; those species not currently protected by statute but considered to be rare or endangered under the California Environmental Quality Act; and species considered by the scientific community to be sufficiently rare to qualify for such listing (e.g., candidate species for listing as threatened or endangered, species of concern to the Department of Fish and Wildlife or U.S. Fish and Wildlife Service, or rare plants identified by the California Native Plant Society).

species of concern An informal term referring to a species that might be in need of conservation action.

spillway The section of a dam designed to permit water to pass over its crest; a weir or channel taking overflow from the dam. The spillway serves as a safety channel to prevent erosion or overtopping of the dam.

sprinkler irrigation A method of irrigation in which the water is sprayed, or sprinkled, through the air to the ground surface.

stakeholder Individuals or groups who can affect or be affected by an organization's activities; individuals or groups with an interest or "stake" in what happens as a result of a decision or action.

State Water Project deliveries The volume of water imported to a given area from the State Water Project.

statewide water management systems These include physical facilities (more than 1,200 State, federal, and local reservoirs, as well as canals, treatment plants, and levees), which make up the backbone of water management in California; and statewide water management programs, which include water-quality standards, monitoring programs, economic incentives, water-pricing policies, and statewide water-efficiency programs such as appliance standards, labeling, and education.

strategic plan The long-term goals of an organization or program and an outline of how they will be achieved (e.g., adopting specific strategies, approaches, and methodologies).

stocking Releasing hatchery-raised fish into water body for the purposes of supplementing existing populations or creating new ones for fishing or to increase a species population. Same as planting.

streamflow The rate of water flow past a specified point in a channel.

subsidence See land subsidence.

surface storage Surface storage uses reservoirs to collect water for later release and use.

surface supply Water supply obtained from streams, lakes, and reservoirs.

system reoperation Changes to existing water system operations and management procedures for existing reservoirs and conveyance facilities to increase their water-related benefits.

T

threatened species An animal or plant species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

tidal wetlands The margins of an estuary that are periodically inundated by tides; includes all habitats within the elevation range between the lowest and highest tides: intertidal mudflats, regularly inundated tidal marsh plains, tidal channels within the marsh, and infrequently inundated wetland-upland transition zones at the edge of the upland.

total capital cost The total monetary cost of option required for “turnkey” implementation, including environmental and third-party impact mitigation, storage, conveyance, energy, capitalized operations and maintenance, administrative costs, planning costs, legal costs, and engineering costs.

total dissolved solids The quantity of the residual minerals dissolved in water that remain after evaporation of a solution.

transpiration An essential physiological process in which plant tissues give off water vapor to the atmosphere.

tributary A stream that flows into a larger stream or other body of water.

turbidity A measure of the cloudiness of water caused by the presence of suspended particles in the water which attenuate or reduce light penetration. Turbidity in natural waters may be composed of organic and/or inorganic constituents and may have direct implications to drinking water treatment.

turnout The point at which water is diverted from a main channel or water delivery facility to a distributing facility; a structure through which a water contractor takes delivery of water.

U

unimpaired flow The flow past a specified point on a natural stream that is unaffected by stream diversion, storage, import, export, return flow, or change in use caused by modifications in land use.

unimpaired runoff A representation of the natural water production of a river basin, unaltered by upstream diversions, storage, or by export or import of water to or from other watersheds.

Urban Water Management Planning Act Sections 10610 through 10657 of the California Water Code. The act requires urban water suppliers to prepare urban water management plans which describe and evaluate sources of water supplies, efficient uses of water, demand management measures, implementation strategies and schedules, and other relevant information and programs within their water service areas. Urban water suppliers (Section 10617) are either publicly or privately owned and provide water for municipal purposes, either directly or indirectly, to more than 3,000 customers or supply more than 3,000 acre-feet of water annually.

urban water use The use of water for urban purposes, including residential, commercial, industrial, recreation, energy production, military, and institutional classes. The term is applied in the sense that it is a kind of use rather than a place of use.

urban water use efficiency Methods or technologies resulting in the same beneficial residential, commercial, industrial, and institutional uses with less water or increased beneficial uses from existing water quantities.

V

vernal pools A type of wetland that occurs in shallow foothill and valley depressions. Water remains in pools and swales until it evaporates, usually within a few days to a few months, mainly in late winter and spring.

volatile organic compound (VOC) A man-made organic compound that readily vaporizes in the atmosphere. These compounds are often highly mobile in the groundwater system and are generally associated with industrial activities.

W

wastewater Domestic or municipal sewage or effluent from an industrial process.

water demand The desired quantity of water that would be used if the water were available and if a number of other factors, such as price, did not change. Demand is not static.

water exchanges Typically water delivered by one water user to another water user; the receiving water user will return the water at a specified time or when the conditions of the parties' agreement are met. (See also, water transfers.)

water quality Description of the chemical, physical, and biological characteristics of water, usually with regard to its suitability for a particular purpose or use.

water quality objectives Specific, legally enforced levels of water quality desired for identified uses, including drinking, recreation, farming, fish production, propagation of other aquatic life, and agricultural, industrial, and urban use.

water recycling The treatment of urban wastewater to a level rendering it suitable for a specific beneficial use.

water right In water law, the right of a user to use water from a water source (e.g., a river, stream, pond, or source of groundwater).

water service reliability The degree to which a water service system can successfully manage water shortages.

water supply exports The amount of water that a region transfers to another to meet needs.

water table See groundwater table.

water transfer A temporary or long-term change in the point of diversion, place of use, or purpose of use due to a transfer or exchange of water or water rights. A more general definition is that water transfers are a voluntary change in the way water is usually distributed among water users in response to water scarcity.

water year A continuous 12-month period for which hydrologic records are compiled and summarized. Different agencies may use different calendar periods for their water years. For DWR, a water year is October 1 through September 30.

watershed The land area from which water drains into a stream, river, or reservoir. Also called drainage area, drainage basin, or river basin.

watershed management The process of evaluating, planning, managing, restoring, and organizing land and other resource use within an area that has a single common drainage point.

weir (1) Any structure across a watercourse used to control, raise, or measure flows; (2) a barrier constructed to catch upstream migrating adult fish.

wetlands Lands including swamps, marshes, bogs, and similar areas such as wet meadows, river overflows, mud flats, and natural ponds. An area characterized by periodic inundation or saturation, certain types of soils, and vegetation adapted for life in saturated soil conditions.

Wild and Scenic River systems State and federally designated river systems under the 1968 national Wild and Scenic Rivers Act and the 1972 California Wild and Scenic Rivers Act. Seventeen rivers in California, including many forks and tributaries are designated wild, scenic, or recreational.

wheel As applied to water and power, to provide the use of one agency's conveyance facilities for the purpose of transporting another agency's supply.

X

X2 Delta outflow interaction with tides determines the location of the X2 isohaline salinity gradient. X2 is the location in the Bay-Delta Estuary where the tidally averaged bottom salinity is 2 parts per thousand. It is expressed as the distance in kilometers from the Golden Gate Bridge. X2 is used as a primary indicator in managing Delta outflow.

Appendix B

Data and Computations Used to Determine 2011 Water Charges

**Appendix B
Data and Computations
Used to
Determine 2011 Water Charges**

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Appendix B

Data and Computations

Used to

Determine 2011 Water Charges

The Department of Water Resources (DWR) annually furnishes Statements of Charges to the 29 long-term State Water Project (SWP) water supply contractors. Article 29(e) of the Standard Provisions for Water Supply Contracts, approved August 3, 1962, describes those statements:

All such statements shall be accompanied by the latest revised copies of the document amendatory to Article 22 and of Tables B, C, D, E, F, and G of this contract, together with such other data and computations used by the State in determining the amounts of the above charges as the State deems appropriate.

To comply with Article 29(e), DWR performs an annual comprehensive review and redetermination of all water supply and financial aspects of the SWP for the entire project repayment period. This annual redetermination is performed in accordance with Article 22(f) and Article 28 of the water supply contracts, which concern the Delta Water Rate and annual transportation charges, respectively.

Appendix B includes data used to document the redetermination of water charges to be paid by contractors during calendar year 2011. The information is based on established data about the SWP, both known and projected, as of June 2010; however, small volumes of water may be reclassified over time pursuant to long-term water supply contract provisions. If research requires more current data than was available at the time of production of

Bulletin 132, please contact the State Water Project Analysis Office. Where applicable, the projected data values shown in this appendix are **shaded** and the bill year data are in **bold** type.

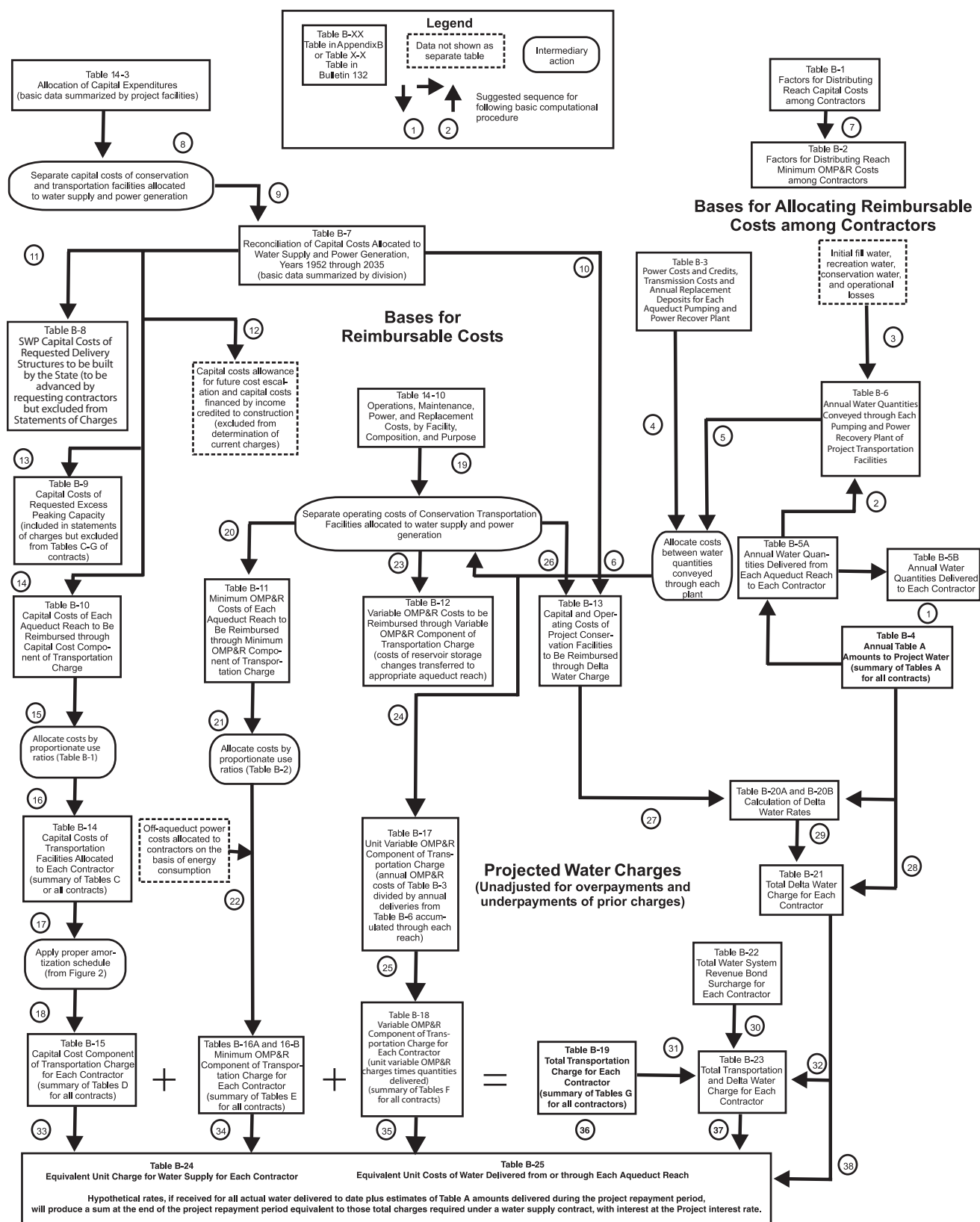
The computational procedures and interrelationships between tabulations in this appendix are outlined on *Figures B-1 and B-2*. All tables referenced on *Figures B-1 and B-2* follow this text.

Types of Water Charges

Charges to SWP water supply contractors include the costs of facilities for the conservation and development of a water supply and the conveyance of such supply to SWP service areas. These facilities are classified as "Project Conservation Facilities" and "Project Transportation Facilities" in the Standard Provisions for Water Supply Contract. Names of the main facilities in each classification follow.

Project Conservation Facilities

- Frenchman Dam and Lake
- Grizzly Valley Dam and Lake Davis
- Antelope Dam and Lake
- Oroville Dam and Lake Oroville
- Oroville power facilities
- Delta facilities
- A portion of the California Aqueduct from the Delta to Dos Amigos Pumping Plant



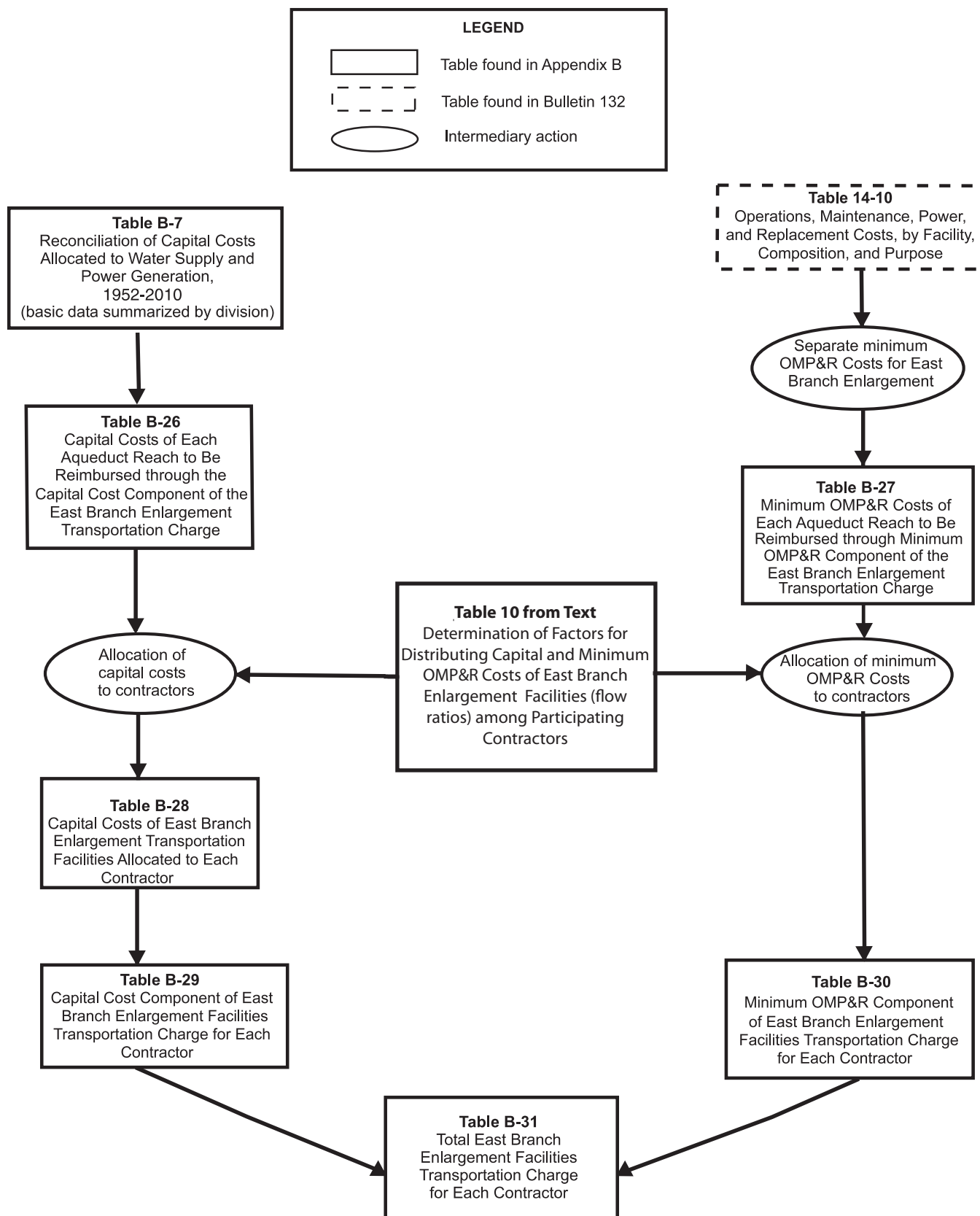


Figure B-2. Relationships of Data Used to Substantiate East Branch Enlargement Charges

- Sisk Dam, San Luis Reservoir, and Gianelli Pumping-Generating Plant

Project Transportation Facilities

- Grizzly Valley Pipeline
- North Bay Aqueduct
- South Bay Aqueduct, including Del Valle Dam and Lake del Valle
- The remainder of the California Aqueduct from the Delta to Dos Amigos Pumping Plant and all facilities south, including dams and lakes in Southern California
- Off-Aqueduct Power Facilities (Reid Gardner Unit No. 4, Bottlerock Powerplant, and South Geysers Powerplant)

The standard provisions provide for a Delta Water Charge and a Transportation Charge for project water.

The Delta Water Charge is a unit charge applied to each acre-foot of SWP water the contractors are entitled to receive, in accordance with their contracts. The unit charge, if applied to each acre-foot of all such allocations for the remainder of the project repayment period, is calculated to result in repayment of all outstanding reimbursable costs of the Project Conservation Facilities, with appropriate interest, by the end of the repayment period (2035).

The Transportation Charge is for use of facilities to transport water to the vicinity of each contractor's turnout(s). Generally, the annual charge represents each contractor's proportionate share of the reimbursable capital costs and operating costs of the Project Transportation Facilities.

Each contractor's allocated share of those reimbursable capital costs is amortized

for repayment to the State, and certain variations are allowed in the amortization methods. Contractors' shares of reimbursable operating costs are repaid in the year such costs are incurred by the State.

The East Branch Enlargement Transportation Charge is paid by the seven Southern California contractors participating in the enlargement. San Bernardino Valley Municipal Water District advanced funds to pay the district's allocated capital costs for the East Branch Enlargement. The remaining six contractors pay an allocated share of the debt service on revenue bonds sold to finance the enlargement. Each contractor also will pay an allocated share of the minimum operation, maintenance, power, and replacement (OMP&R) costs of the East Branch Enlargement.

Transportation charges for the Coastal Branch Extension, East Branch Extension, and South Bay Enlargement are being repaid by contractors in their respective service areas.

Transportation charges for the Tehachapi Afterbay are repaid by those contractors using electrical power for delivery of their Table A water downstream of the Tehachapi Afterbay.

Composition and Timing of Water Charges

As shown on *Figure B-3*, the Delta Water Charge and the Transportation Charge consist of the following three components:

1. Conservation and transportation capital cost components, which will return to the State all reimbursable capital costs;
2. Conservation and transportation minimum OMP&R components, which

Delta Water Charge

Capital Cost Component

1. Planning, design, right-of-way, and construction costs of Conservation Facilities
2. Operations and maintenance costs for newly constructed Conservation Facilities prior to initial operations
3. Activation costs for newly constructed Conservation Facilities
4. Power costs allocated to initial filling of San Luis Reservoir
5. Capitalized O&M costs (major repair work and so forth) for Conservation Facilities
6. Program costs (portion) to mitigate impacts on current Delta fishery population due to SWP pumping prior to 1986
(Department of Water Resources-Department of Fish and Game agreement)

Minimum OMP&R Component

1. Direct O&M costs of Conservation Facilities
 - a. Headquarters and field divisions (portion)
 - b. Insurance and FERC costs (portion)
2. General O&M costs allocated to Conservation Facilities
 - a. Contractor Accounting Office (portion)
 - b. Financial and contract administration (portion)
 - c. Water rights
 - d. Power planning for SWP facilities (portion)
3. Replacement deposits for SWP control centers (portion)
4. Credits for a portion of Hyatt-Thermalito power generation
5. Power costs and credits related to pumping water to San Luis Reservoir for project operations (storage changes)
6. Value of power used and generated by Gianelli Pumping-Generating Plant
7. Program costs (portion) to offset annual fish losses resulting from pumping at Banks Pumping Plant
(Department of Water Resources-Department of Fish and Game agreement)

Transportation Charge

Capital Cost Component

1. Planning, design, right-of-way, and construction costs of Transportation Facilities
2. O&M costs for newly constructed Transportation Facilities prior to initial operation
3. Activation costs for newly constructed Transportation Facilities
4. Power costs allocated to initial filling of Southern California reservoirs
5. Capitalized O&M costs (major repair work and so forth) for Transportation Facilities
6. Program costs (portion) to mitigate impacts on current Delta fishery population due to SWP pumping prior to 1986
(Department of Water Resources-Department of Fish and Game agreement)

Minimum OMP&R Component

1. Direct O&M costs of Transportation Facilities
 - a. Headquarters and field divisions (portion)
 - b. Insurance and FERC costs (portion)
2. General O&M costs related to Transportation Facilities
 - a. Contractor Accounting Office (portion)
 - b. Financial and contract administration (portion)
 - c. Power planning for SWP facilities (portion)
3. Power costs and credits related to pumping water to Southern California reservoirs for project operations (storage changes)
4. Power costs for pumping water to replenish losses from Transportation Facilities
5. Other power costs
 - a. Station service at Transportation Facility power and pumping plants
 - b. Transmission service costs related to "backbone" Transportation Facilities
6. Replacement deposits for SWP control centers (portion)
7. Off-Aqueduct Power Facility costs—bond service, bond cover costs (25 percent of bond service), bond reserves, transmission costs to provide service to backbone, fuel costs taxes, and O&M-less power sales allocated to Off-Aqueduct Power Facilities
8. Program costs (portion) to offset annual fish losses resulting from pumping at Banks Pumping Plant
(Department of Water Resources-Department of Fish and Game agreement)

Variable OMP&R Component

1. Power purchase costs
 - a. Capacity
 - b. Energy
 - c. Pine Flat bond service, O&M, and transmission costs allocated to aqueduct pumping plants
2. Alamo, Devil Canyon, Warne, and Castaic power generation credited at the powerplant reach and charged to aqueduct pumping plants
3. Hyatt-Thermalito Diversion Dam powerplant generation charged to aqueduct pumping plants (credits for this generation are reflected in the Delta Water Rate)
4. Replacement deposits for equipment at pumping plants and powerplants
5. Credits from sale of excess SWP system power
6. Program costs (portion) to offset annual fish losses resulting from pumping at Banks Pumping Plant
(Department of Water Resources-Department of Fish and Game agreement)

Note: Excludes costs recovered under the East Branch Enlargement Transportation Charge.

Figure B-3. Composition of Delta Water Charge and Transportation Charge

will return to the State all reimbursable operating costs that do not depend on or vary with quantities of water actually delivered to the contractors; and

3. A transportation variable OMP&R component, which will return to the State all reimbursable operating costs that depend on, and vary with, quantities of water actually delivered to the contractors.

The formula for computing the Delta Water Rate, Article 22(f) of the Standard Provisions for Water Supply Contract, was designed to ensure that all adjustments for prior overpayments or underpayments of the Delta Water Charge are accounted for in a redetermination of the rate. Since the redetermined rate applies to all future allocations, such adjustments are amortized during the remainder of the project repayment period. This appendix includes a redetermination of the Delta Water Rate for 2011.

Article 28 of the standard provisions stipulates that Transportation Charges be redetermined each year. The tables in Appendix B include the numerical data used in this redetermination. Transportation Charges for prior years through 2010, included in those tables are the redetermined amounts, and do not equal the amounts actually paid by contractors.

As provided under the Water System Revenue Bond Amendment to the water supply contracts, differences between actual payments under the Transportation capital cost component and amounts computed in this redetermination are accumulated with interest and amortized during the remaining years of the contract repayment period. All computations for adjustments are included in the attachments accompanying each contractor's Statement of Charges and are reflected in revised copies of Table C

through Table G of the contract, which are also furnished to each long-term water supply contractor in the annual statements of charges.

These redeterminations exclude four charges associated with water service other than the Delta Water Charge and the Transportation Charge. The excluded charges (and the manner in which they are treated in this appendix) are outlined below.

1. Advances of funds pursuant to Article 24(d) of the standard provisions for excess capacity constructed by the State at the request of contractors.
2. Advances of funds pursuant to Article 10(d) of the standard provisions for delivery structures (turnouts) constructed by the State at the request of contractors. Partial information concerning actual and projected capital costs of such delivery structures is included in this appendix. Statements concerning these costs and data are furnished to the appropriate contractors at various times and are not part of the annual statements.
3. Payments for sale and service of surplus water to entities other than contractors, pursuant to Article 21 of the standard provisions, are also excluded. Those payments are generally based on the unit rates shown in Table B-25. Net revenues resulting from noncontractor service are applied as indicated on page 24 of Bulletin 132-71.
4. Payments under the Devil Canyon-Castaic contract for costs of the Devil Canyon-Castaic facilities allocable to power generation. Charges billed as a result of the contract are billed separately from those billed as a result of the water supply contract. Information about the treatment of such charges in relation to redetermined

Transportation Charges is included in special attachments to the bills of the six participating contractors.

Time and method of payment for corresponding components of the Delta Water Charge and the Transportation Charge are as follows:

1. The capital cost components of the Delta Water Charge and the Transportation Charge are paid in two semiannual installments, due January 1 and July 1 of each year, based on statements furnished by the State on or before July 1 of the preceding year.
2. The minimum OMP&R components of the Delta Water Charge and the Transportation Charge are paid in 12 equal installments, due the first of each month and based on statements furnished by the State on or before July 1 of the preceding year.
3. The variable OMP&R component of the Transportation Charge is paid in varying monthly amounts and is due the fifteenth day of the second month following actual water delivery. The charges are projected based on a unit charge per acre-foot established on or before July 1 of the preceding year. Those unit charges may be revised during the year to reflect current power costs and revenues. The unit charges are applied to actual monthly delivery quantities as determined by the State on or before the fifteenth day of the month following actual water delivery.

Bases for Allocating Reimbursable Costs among Contractors

This section describes procedures for allocating reimbursable costs of Project

Transportation Facilities among contractors (see upper right portion of *Figure B-1*). Those costs do not include annual costs of Off-Aqueduct Power Facilities, which are explained in the "Project Water Charges" section.

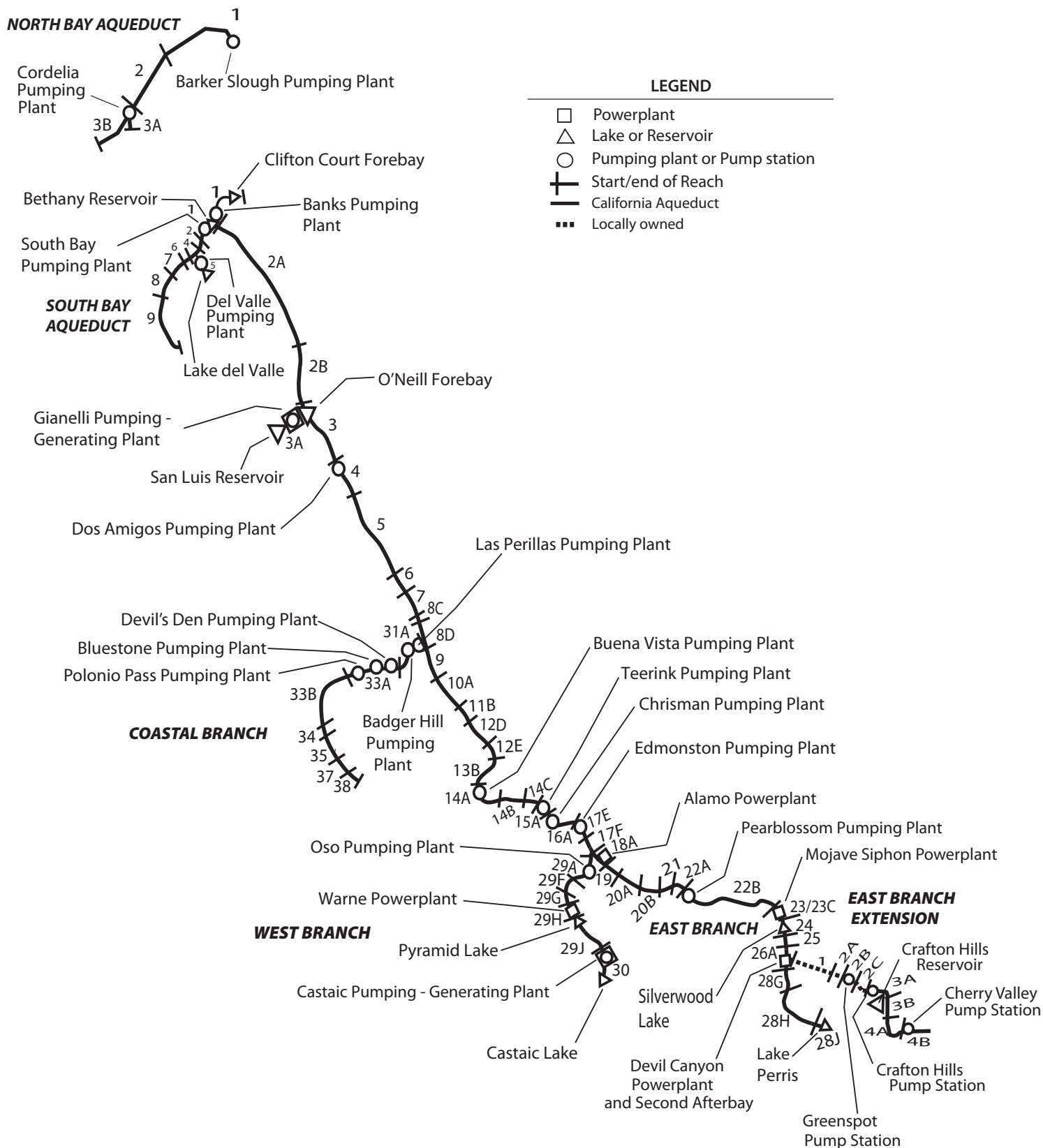
Capital and Minimum OMP&R Costs

Figure B-4 includes information about the repayment reaches that form the basis for allocating reimbursable costs of the Project Transportation Facilities among contractors.

Allocations of reimbursable capital costs and minimum OMP&R costs of each reach are based on the proportionate maximum use of that reach by respective contractors under planned conditions of full development.

The derivation of ratios that represent the proportionate maximum use of each aqueduct reach by the respective contractors was first reported in Bulletin 132-70. The ratios in Bulletin 132-70 were subsequently revised for the North Bay Aqueduct, the South Bay Aqueduct, the California Aqueduct from the Delta to Castaic Lake, and the Coastal Branch.

All the revisions reported in previous bulletins regarding the derivation of ratios that represent the proportionate maximum use of each aqueduct reach by the respective contractors were last reported in Tables B-1 and B-2 of Bulletin 132-91. Under Article 53 of the Monterey Amendment, agricultural contractors may sell up to 130,000 acre-feet of aqueduct capacity to municipal and industrial contractors. The first permanent transfer occurred in 1998. Currently, 114,000 acre-feet of the allowable capacity has been transferred. Table 1 shows the permanent capacity transfers that have taken place since the Monterey Amendment was implemented in 1995.



North Bay Aqueduct

- 1 Barker Slough through Fairfield /Vacaville Turnout
- 2 Fairfield/Vacaville Turnout to Cordelia Forebay
- 3A Cordelia Forebay through Benicia and Vallejo Turnouts
- 3B Cordelia Forebay through Napa Turnout Reservoir

South Bay Aqueduct

- 1 Bethany Reservoir through Altamont Turnout
- 2 Altamont Turnout through Patterson Reservoir
- 4 Patterson Reservoir to Del Valle Junction
- 5 Del Valle Junction through Lake del Valle
- 6 Del Valle Junction through South Livermore Turnout
- 7 South Livermore Turnout through Vallecitos Turnout
- 8 Vallecitos Turnout through Alameda-Bayside No.1 Turnout
- 9 Alameda-Bayside Turnout through Santa Clara Terminal Facilities

California Aqueduct**North San Joaquin Division**

- 1 Delta through Bethany Reservoir
- 2A Bethany Reservoir to Orestimba Creek
- 2B Orestimba Creek to O'Neill Forebay

San Luis Division

- 3A Sisk Dam, San Luis Reservoir, Gianelli Pumping-Generating Plant
- 3 O'Neill Forebay to Dos Amigos Pumping Plant
- 4 Dos Amigos Pumping Plant to Panoche Creek
- 5 Panoche Creek to Five Points
- 6 Five Points to Arroyo Pasajero
- 7 Arroyo Pasajero to Kettleman City

South San Joaquin Division

- 8C Kettleman City through Milham Avenue
- 8D Milham Avenue through Avenal Gap
- 9 Avenal Gap through Twisselman Road
- 10A Twisselman Road through Lost Hills
- 11B Lost Hills to 7th Standard Road
- 12D 7th Standard Road through Elk Hills Road
- 12E Elk Hills Road through Tupman Road
- 13B Tupman Road to Buena Vista Pumping Plant
- 14A Buena Vista Pumping Plant through Santiago Creek
- 14B Santiago Creek through Old River Road
- 14C Old River Road to Teerink Pumping Plant
- 15A Teerink Pumping Plant to Chrisman Pumping Plant
- 16A Chrisman Pumping Plant to Edmonston Pumping Plant

Coastal Branch, California Aqueduct

- 31A Avenal Gap to Devil's Den Pumping Plant
- 33A Devil's Den Pumping Plant through Tank 1
- 33B Tank 1 through Chorro Valley Turnout
- 34 Chorro Valley Turnout through Lopez Turnout
- 35 Lopez Turnout through Guadalupe Turnout
- 37 Guadalupe Turnout to SPRR crossing near Casmalia
- 38 SPRR crossing near Casmalia through terminous at Tank 5 (Outlet Vault)

Tehachapi Division

- 17E Edmonston Pumping Plant to Porter Tunnel
- 17F Porter Tunnel to Junction, West Branch

Mojave Division

- 18A Junction, West Branch through Alamo Powerplant
- 19 Alamo Powerplant to Fairmont
- 19C Buttes Junction through Buttes Reservoir
- 20A Fairmont through 70th Street West
- 20B 70th Street West to Palmdale
- 21 Palmdale to Littlerock Creek
- 22A Littlerock Creek to Pearblossom Pumping Plant
- 22B Pearblossom Pumping Plant to West Fork Mojave River
- 23 West Fork Mojave River to Silverwood Lake
- 23C Mojave Siphon Powerplant
- 24 Cedar Springs Dam and Silverwood Lake

Santa Ana Division

- 25 Silverwood Lake to South Portal, San Bernardino Tunnel
- 26A South Portals San Bernardino Tunnel through Devil Canyon Powerplant and Second Afterbay
- 28G Devil Canyon Powerplant and Second Afterbay to Barton Road
- 28H Barton Road to Lake Perris
- 28J Perris Dam and Lake Perris

East Branch Extension

- 1 Devil Canyon Powerplant to Junction, Foothill Pipeline near Cone Camp Road
- 2A Junction, Foothill Pipeline near Cone Camp Road to Greenspot Pump Station
- 2B Greenspot Pump Station to Morton Canyon Valve Vault
- 2C Morton Canyon Valve Vault to Crafton Hills Pump Station
- 3A Crafton Hills Pump Station to Carter Street Valve Vault
- 3B Carter Street Valve Vault to Garden Air Creek, South of San Bernardino/Riverside County Line
- 4A Garden Air Creek to Cherry Valley Pump Station
- 4B Cherry Valley Pump Station to Terminus at Noble Creek

West Branch, California Aqueduct

- 29A Junction, California Aqueduct through Oso Pumping Plant
- 29F Oso Pumping Plant through Quail Embankment
- 29G Quail Embankment through Warne Powerplant
- 29H Pyramid Dam and Lake
- 29J Pyramid Lake through Castaic Powerplant
- 30 Castaic Dam and Lake

Table B-1 presents the reach ratios currently applicable to reimbursable capital costs.

Table B-2 presents corresponding ratios for allocating 2011 and after reimbursable minimum OMP&R costs among contractors. Requested excess capacity is omitted when deriving ratios applicable to capital costs because the capital costs for the excess capacity are paid on an incremental-cost basis and not a proportionate-use basis. However, requested excess capacity is accounted for in the ratios applicable to minimum OMP&R costs.

Variable OMP&R Costs

Article 26(a) includes provisions to ensure that the variable OMP&R component of the Transportation Charge will result in a return to the State of those costs that depend on and vary with the amount of SWP water deliveries. (The minimum OMP&R component results in a return of those operating costs that do not vary with deliveries.) Under Article 26(a) all such costs for a reach for a given year will be allocated among contractors in proportion to the actual annual use of that reach by the respective contractors.

Table B-3 summarizes the total power costs, credits, and transmission costs for each aqueduct pumping and power recovery plant. Variable costs are the following:

- Costs of capacity and energy used exclusive of associated power transmission and station service charges (transmission and station service costs that are independent and vary with power usage are classified as minimum OMP&R costs).
- Credits for capacity and energy produced at aqueduct power recovery plants (treated as negative costs).
- Payments for replacement of major

plant machinery components having economic lives shorter than the project repayment period. (In 1997, DWR discontinued charging for a sinking fund for replacements. Replacement costs, for 1999 and thereafter, are to be paid on an annual basis as the costs are incurred.)

- Beginning in 2005, a portion of transmission expenditures that will depend on and vary with water and power usage. These costs will be included as part of the variable component. Costs reflect the revised 2008 transmission rate structure from Pacific Gas and Electric.

Table B-3 excludes plant capacity and energy costs associated with surplus and unscheduled water service after May 1, 1973. Prior to that date, surplus water service was charged the same unit variable OMP&R component as allocated water service. An amendment to the long-term water supply contracts in 1973 significantly changed the rate structure for surplus water service. Capacity and energy costs for pumping surplus and unscheduled water were allocated directly to those water contractors receiving surplus and unscheduled water service. A contract amendment in 1991 again revised the rate structure to provide for payment of costs through a melded power rate. These revisions to charges for surplus and unscheduled water are effective from the date of the amendments and are not applied to past charges.

An interruptible water program was established in 1994. This program, later renamed to Article 21 program, is based on individual annual contracts; costs for Article 21 water actually delivered are included in *Table B-3*.

Table 1. Summary of Permanent Aqueduct Capacity Transfers

| Contractor | | Capacity Transfer | | |
|--|----------------|-------------------|----------------|--|
| Seller | Buyer | Amount (af) | Effective Year | Transfer Description |
| Transfers under Monterey Amendment | | | | |
| Kern | Mojave | 25,000 | 1998 | Purchased capacity upstream from Reach 31A |
| Kern | Castaic Lake | 41,000 | 2000 | Purchased capacity upstream from Reach 16A |
| Kern | Palmdale | 4,000 | 2000 | Purchased capacity upstream from Reach 11B |
| Kern | Alameda-Zone 7 | 7,000 | 2000 | Purchased capacity upstream from Reach 10A |
| Kern | Alameda-Zone 7 | 15,000 | 2000 | Purchased capacity upstream from Reach 10A |
| Kern | Alameda-Zone 7 | 10,000 | 2001 | Purchased capacity upstream from Reach 11B |
| Kern | Solano | 5,756 | 2001 | Purchased capacity upstream from Reach 11B and Reach 31A |
| Kern | Napa | 4,025 | 2001 | Purchased capacity upstream from Reach 11B and Reach 31A |
| Kern | Alameda-Zone 7 | 2,219 | 2004 | Purchased capacity upstream from Reach 11B |
| <i>Subtotal under Article 53</i> | | <i>114,000</i> | | |
| Transfers outside of Monterey Amendment | | | | |
| Tulare | Dudley Ridge | 3,973 | 2002 | Purchased capacity upstream from Reach 8D |
| Tulare | AVEK | 3,000 | 2002 | Purchased capacity upstream from Reach 8D |
| Tulare | Alameda-Zone 7 | 400 | 2003 | Purchased capacity upstream from Reach 8D |
| Tulare | Kings | 5,000 | 2004 | Purchased capacity upstream from Reach 8D |
| Tulare | Coachella | 9,900 | 2004 | Purchased capacity upstream from Reach 8D |
| MWDSC | Coachella | 88,100 | 2005 | Purchased capacity upstream from Reach 28J |
| MWDSC | Desert | 11,900 | 2005 | Purchased capacity upstream from Reach 28J |
| Tulare | Kings | 305 | 2006 | Purchased capacity upstream from Reach 31A |
| Tulare | Desert | 1,750 | 2010 | Purchased capacity upstream from Reach 17F |
| Tulare | Coachella | 5,250 | 2010 | Purchased capacity upstream from Reach 17F |
| Kern | Desert | 4,000 | 2010 | Purchased capacity upstream from Reach 17F and Reach 31A |
| Kern | Coachella | 12,000 | 2010 | Purchased capacity upstream from Reach 17F and Reach 31A |
| Dudley Ridge | Mojave | 7,000 | 2010 | Purchased capacity upstream from Reach 8D |
| <i>Subtotal outside of Article 53</i> | | <i>152,578</i> | | |

Water Conveyance

Tables B-4, B-5A, B-5B, and B-6 present water conveyance quantities that form the basis for allocating costs.

Table B-4 presents the schedules of annual allocations as set forth in Table A and Article 6(a) of each water supply contract.

Table B-5A shows amounts of actual and projected allocated water quantities delivered from each aqueduct reach to each contractor. Projected deliveries for years

2010 through 2035 are based on contractors' requests for future water deliveries. The quantities included in Table B-5A also include nonproject water delivered to contractors and surplus water deliveries prior to May 1, 1973, and actual Article 21 water deliveries in 1994 and after.

Table B-5B presents a summary of actual and projected annual allocated water quantities for each contractor. The quantities also include amounts of nonproject water and surplus water delivered prior to May 1, 1973,

and actual deliveries of Article 21 water in 1994 and after.

Table B-6 summarizes the annual allocated water quantities conveyed or to be conveyed through each aqueduct pumping plant or power plant for each of the following functions:

- *Deliveries-Water Supply.* Water made available to contractors at down-aqueduct delivery structures, including certain hypothetical quantities to facilitate cost allocations, for those years when deliveries are made from net annual storage withdrawals. The net annual amounts of storage withdrawals are hypothetically added to the actual amounts conveyed from the Delta to the reservoirs, since deliveries made from storage withdrawals bear the same variable OMP&R costs per acre-foot as they would if the deliveries were actually conveyed from the Delta in that year. The hypothetical increases in the deliveries made from reservoir storage withdrawals are offset by equal credits to the minimum OMP&R costs of the respective reservoirs. Thus, the variable OMP&R components per acre-foot (*Table B-17*) may be applied to the total annual quantities delivered either from aqueduct reservoir storage or from the Delta.
- *Initial Fill Water.* Water required for initial filling of down-aqueduct reaches and reservoirs or for repayment of pre-consolidation water used during construction.
- *Deliveries-Recreation.* Water delivered to down-aqueduct recreation developments or used for fish and wildlife enhancement.
- *Operational Losses.* Water lost through evaporation and seepage from all down-aqueduct reaches.
- *Reservoir Storage Changes.* Water placed in down-aqueduct reservoir storage after initial filling of the reservoirs, including projected net annual storage

accretions (positive values) and withdrawals (negative values) for all down-aqueduct reservoirs of the Project Transportation Facilities.

Variable OMP&R costs (*Table B-12*) that are allocable to storage accretions are assigned to the minimum OMP&R costs of the respective reservoirs. With the exception of Banks Pumping Plant, "Reservoir Storage Changes" also includes SWP water placed into Southern California groundwater storage from 1978 through 1982 (as positive amounts); and water withdrawn from storage and delivered to contractors in 1979, 1982, 1987, 1988, and 1989 (as negative amounts). At Banks Pumping Plant, groundwater additions and withdrawals are included in "Conservation Water."

Table B-6 also summarizes the following two amounts under the heading "Conservation Water" (Column 25):

1. Net annual water amounts stored and projected to be stored in San Luis Reservoir.
2. Water lost and projected to be lost through evaporation and seepage from San Luis Reservoir and from the water conservation portion of the California Aqueduct.

"Conservation Water" includes initial fill water, operational losses, and net annual storage changes associated with San Luis Reservoir and the portion of the California Aqueduct that is allocated to conservation. The same allocation procedure outlined previously for Transportation Facilities also applies to water delivered from storage in Conservation Facilities, except that the hypothetical cost increases are added to the variable OMP&R cost to be reimbursed through the Transportation Charge and deducted from the minimum OMP&R costs to be reimbursed through the Delta Water Charge.

San Luis Reservoir is operated to conserve water for future delivery to downstream contractors. To account for costs associated with reservoir storage, the power and replacement costs of Banks Pumping Plant (a joint Transportation-Conservation Facility) that are allocated to the conveyance of annual conservation water quantities are transferred to the capital costs of San Luis Reservoir (during initial fill) or to the minimum OMP&R costs of San Luis Reservoir (following initial fill).

In years of net storage withdrawal from San Luis Reservoir, a portion of the minimum OMP&R cost of the reservoir is transferred

to the variable OMP&R cost of Banks Pumping Plant. That transfer is equal to the variable OMP&R cost per acre-foot of delivery through Banks Pumping Plant for that year, multiplied by the acre-feet of deliveries derived from San Luis Reservoir storage for that year. *Table B-6* also includes amounts of nonproject water and surplus water delivered prior to May 1, 1973, and actual deliveries of Article 21 water in 1994 and after.

Table 2. Project Purpose Cost Allocation Factors (Percentages)

| | Water Supply and Power Generation | | All Other Purposes (Nonreimbursable) | |
|--|-----------------------------------|---------------------|--------------------------------------|---------------------|
| | Capital Costs | Minimum OMP&R Costs | Capital Costs | Minimum OMP&R Costs |
| PROJECT FACILITIES | | | | |
| Project Conservation Facilities | | | | |
| Frenchman Dam and Lake | 21.5 | 0.0 | 78.5 | 100.0 |
| Antelope Dam and Lake | 0.0 | 0.0 | 100.0 | 100.0 |
| Grizzly Valley Dam and Lake Davis | 1.0 | 1.8 | 99.0 | 98.2 |
| Oroville Division ^(a) | 97.1 | 99.5 | 2.9 | 0.5 |
| California Aqueduct, Delta to Dos Amigos Pumping Plant | 96.6 | 96.7 | 3.4 | 3.3 |
| Delta Facilities | | | | |
| Peripheral Canal Related | 86.0 | 86.0 | 14.0 | 14.0 |
| Remaining of Delta Facilities | 96.6 | 96.7 | 3.4 | 3.3 |
| Transportation Facilities | | | | |
| Grizzly Valley Pipeline | 100.0 | 100.0 | 0.0 | 0.0 |
| North Bay Aqueduct | 100.0 | 100.0 | 0.0 | 0.0 |
| South Bay Aqueduct | | | | |
| Del Valle Dam and Lake del Valle | 25.2 | 22.0 | 74.8 ^(b) | 78.0 ^(c) |
| Remainder of South Bay Aqueduct | 100.0 | 100.0 | 0.0 | 0.0 |
| California Aqueduct | | | | |
| Delta to Dos Amigos Pumping Plant | 96.6 | 96.7 | 3.4 | 3.3 |
| Dos Amigos Pumping Plant to termini (excluding Coastal Branch) | 94.3 | 96.9 | 5.7 | 3.1 |
| Coastal Branch | 100.0 | 100.0 | 0.0 | 0.0 |

^(a)Percentages indicated are applicable to the remaining costs of division after excluding costs allocated to flood control that are reimbursed by the federal government (22 percent of capital costs) and excluding specific power costs of Hyatt and Thermalito Powerplants and switchyards.

^(b)Percentage indicated consists of 48.0 percent of costs allocated to recreation and 26.8 percent to flood control.

^(c)Percentage indicated consists of 44.9 percent of costs allocated to recreation and 33.1 percent to flood control.

Bases for Reimbursable Costs

This section describes the methods used to derive the costs allocated by the procedures outlined in the preceding section. A diagram of the cost derivation process is shown in the upper-left quadrant of *Figure B-1*.

First, the capital and minimum OMP&R costs of all SWP facilities are allocated among the various project purposes in accordance with the allocation percentages in Table 2. Those percentages may be subject to revision in the future.

The redeterminations in this appendix involve only the SWP costs that are allocated to water supply and power generation.

Capital and Minimum OMP&R Costs

Capital costs used in the redeterminations in this appendix reflect prices prevailing on December 31, 2009; future cost escalation will be reflected in subsequent bulletins.

Table B-7 presents a reconciliation of estimated total capital costs of each Project Conservation Facility and each Project Transportation Facility. This table shows the relationship of Project Conservation and Transportation costs allocated to contractors (Tables B-8, B-9, B-10 and B-13) to the total SWP capital costs projected by DWR.

Table B-8 shows costs incurred and projected to be incurred by the State in connection with each contractor's turnouts. Costs incurred by the State for both State-constructed and contractor-constructed delivery structures are paid directly by the contractors for which the structures are built. The State incurs design review and construction inspection costs in connection with contractor-constructed turnouts.

Table B-9 lists costs and payments for excess capacity built into SWP Transportation Facilities in accordance with amendments to contracts with Metropolitan Water District of Southern California (Metropolitan), San Gabriel Valley Municipal Water District, and Antelope Valley-East Kern Water Agency, including the following:

- Additional costs incurred by the State for requested excess capacity;
- Advances by water contractors of funds for such costs; and
- Credits for advances in excess of costs, which were applied to respective contractors' installments of the capital cost component of the Transportation Charge in 1981.

Under Amendment 2 of Metropolitan's contract, 809 cubic feet per second of excess capacity was originally constructed in reaches of the West Branch at Metropolitan's request. That capacity was reclassified as basic capacity of SWP Transportation Facilities under Amendment 7. Metropolitan paid \$16.3 million as a prepayment of the capital cost component of the Transportation Charge in lieu of advancing funds for the original requested capacity.

Amendment 5 to Metropolitan's contract requires that additional costs for modifications to the Santa Ana Pipeline (required for enlargement of Lake Perris) will be allocated to Metropolitan and returned to the State through payments of the Transportation Charge. The additional costs to be repaid through Metropolitan's capital cost component for the aqueduct reach from Devil Canyon Powerplant to Barton Road total about \$6.7 million (see Bulletin 132-72, page 98).

Table B-10 presents the actual and projected annual capital costs of each aqueduct reach that will eventually be returned to the

State, with interest, through contractors' payments of the capital cost component of the Transportation Charge and payment of debt service under the Devil Canyon-Castaic contracts.

Annual Operating Costs

Annual operating costs allocable to water supply and power generation are returned to the State through the minimum OMP&R components of the Delta Water Charge and the Transportation Charge and through a portion of the revenues from energy sales. All reimbursable operating costs of Conservation Facilities are included in the minimum OMP&R component of the Delta Water Charge.

Transportation and Devil Canyon-Castaic Contract Costs

Table B-11 shows the amounts of the actual and projected costs to be reimbursed through payments of the minimum OMP&R component of the Transportation Charge and allocated operating costs under the Devil Canyon-Castaic contract. The table includes the following seven types of operating costs incurred annually that do not vary with water quantities delivered to the contractors:

1. All direct labor charges for field operation and maintenance personnel, including associated indirect costs;
2. A distributed share of general operating costs that cannot be identified solely with one facility or aqueduct reach;
3. All of electric power transmission and station service costs up to 2004, and electric power transmission and station service costs for 2005 and after that do not vary with power usage allocable to aqueduct pumping and recovery plants;
4. All costs for equipment, materials, and supplies;

5. Portions of the power and replacement costs of all up-aqueduct pumping plants and power plants that are allocable to the annual conveyance of water lost to evaporation and seepage from respective aqueduct reaches or placed into storage in respective reservoirs of the project transportation facilities (after initial fill);
6. Credits, which offset those costs in (5) above, for deliveries drawn from reservoir storage; and
7. Escalation of projected operating costs at 2.5 percent per year for 2011 and 2012 plus
8. Escalation of projected operating costs at one percent per year for 2013-2035.

Table B-12 shows the portions of variable OMP&R costs in *Table B-3* that are allocable to the water supply delivery quantities included in *Table B-6* and reimbursed through payments of the variable OMP&R component of the Transportation Charge.

To derive *Table B-12* costs, the following adjustments are made to *Table B-3* costs:

1. Part of the variable OMP&R costs of each plant is allocated to recreation. The allocation to recreation is in proportion to the quantity of water conveyed through each plant each year for delivery to on-shore recreational developments. That portion of variable plant costs attributable to the initial fill of aqueduct reaches is allocated to the joint capital costs of respective down-aqueduct reaches and reservoirs.
2. That portion of costs attributable to evaporation and seepage is allocated to the joint minimum OMP&R costs of respective down-aqueduct reaches and reservoirs.

3. Adjustments are made for additions or withdrawals from storage in aqueduct reservoirs. In years when water is added to storage in aqueduct reservoirs, the cost of conveying this water into storage is charged to the minimum OMP&R costs of the corresponding reservoir. In years when storage in aqueduct reservoirs is decreased for the purpose of making deliveries, a credit is applied to the minimum OMP&R costs of the reservoir from which the storage is released. This credit is equal to the number of acre-feet of storage reduction times the variable OMP&R unit rate for the year the storage is released. The unit rate is equal to the variable OMP&R unit rate for the year the water is taken from storage.
4. That portion of costs attributable to pumping water to replace evaporation and seepage losses and for additions or withdrawals from storage in San Luis Reservoir is charged to the minimum OMP&R component of the Delta Water Rate.

The remaining costs are allocated to transportation water supply and repaid by the contractors.

Conservation Capital and Operating Costs

Table B-13 is a summary of actual and projected capital and operating costs of the initial Project Conservation Facilities. These costs are reimbursed through payments by contractors under the Delta Water Charge, Oroville power sales, and Gianelli Generating Plant credits. *Table B-13* also shows credits applied to the reimbursable capital costs of the Project Conservation Facilities in accordance with negotiated settlements concerning incurred planning costs for the period from 1952 through 1978.

Project Water Charges

This section describes the redetermination of past and projected components of the Transportation Charge for annual revision of *Tables C through G* of each water supply contract. This section also describes the derivation of the unit Delta Water Rates and the Water System Revenue Bond Surcharge.

A summary of equivalent unit charges for each acre-foot of allocated water service is also included for each contractor and each aqueduct reach. A diagram of all calculations may be found in the lower half of *Figure B-1*.

Transportation Charges

The accumulation of allocated costs of each aqueduct reach to each contractor is the basis for the Transportation Charge components.

Table B-14 summarizes each contractor's share of the capital costs of the aqueduct reaches presented in *Table B-10*. Those amounts are determined by applying proportionate-use ratios set forth in *Table B-1* to the costs in *Table B-10*. The resulting allocated costs are set forth in *Table C* of the respective water supply contracts.

Prepayments of the capital cost component, required under Metropolitan's Amendment 7, are included as negative capital costs in *Table B-14* and *Table C* of Metropolitan's Statement of Charges. Solano, Empire-West Side Irrigation District, and Castaic Lake Water Agency also prepaid capital costs (see *Table B-14* footnotes). *Table B-14* includes costs of the East Branch Extension to provide water service to San Bernardino Valley Municipal Water District and San Geronio Pass Water Agency.

Both Table B-14 and Table C of the six contractors for project water service below Devil Canyon Powerplant and Castaic Powerplant include the capital costs reimbursable under the Devil Canyon-Castaic contract.

Table B-15 summarizes capital cost components of the Transportation Charge for each contractor for each year of the project repayment period. By the year 2035, the capital cost components shown in Table B-15 will recover the costs shown in Table B-14, with interest at the Project Interest Rate of 4.608 percent per annum and based on the amortization schedules included in *Table 3*.

Those estimated components, subsequently adjusted for prior overpayments or underpayments, are included in Table D of the water supply contracts. Costs of excess capacity are billed separately and are not included in Table B-15.

Table B-15 includes the debt service payments due from the six contractors down-aqueduct from Devil Canyon Powerplant and Castaic Powerplant, in accordance with terms of the Devil Canyon-Castaic contract.

Table B-16A summarizes the minimum OMP&R components of the Transportation Charge for each year of the project repayment period. Those estimated components, subsequently adjusted for prior overpayments or underpayments, are included in Table E of the respective contracts.

The total amounts included in Table B-16A are determined by applying the proportionate-use ratios in Table B-2 to the reach costs in Table B-11.

Table B-16A excludes Off-Aqueduct Power Facility charges, which are included separately in Table B-16B. Both Table B-16A and Table E include the operating costs payable under the Devil Canyon-Castaic contract for the six contractors down-aqueduct from Devil Canyon Powerplant and Castaic Powerplant.

As part of operating agreements with DWR, Kern was billed from 1963 through 1987 for any additional operating costs caused by early installation of units in Las Perillas and Badger Hill Pumping Plants by Berrenda Mesa Water Storage District (see Bulletin 132-71, page 7). Under those agreements, a portion of minimum OMP&R costs of Reach 31A were assigned directly to Kern, as shown in Table 4, with the remaining reach costs allocated by application of the proportionate-use ratios. DWR purchased the last unit, Unit No. 6, at Las Perillas and Badger Hill Pumping Plants in early 1997 to provide pumping capacity for deliveries to Coastal Area contractors, which began in 1997.

As a result of the Monterey Amendment, the costs related to this settlement are to be allocated among all SWP contractors in proportion to their maximum Table A amounts. As costs are incurred, related charges will be included in the contractors' annual Statements of Charges as part of the minimum. It is estimated that between 2002 and 2010, the Monterey Amendment litigation costs will be slightly less than \$16 million.

Table B16-B summarizes annual Off-Aqueduct Power Facility charges allocated to each water contractor, adjusted for prior overpayments or underpayments. Those charges are to repay all Off-Aqueduct Power costs, including bond service, deposits for reserves, operation and maintenance costs, fuel costs, taxes, and insurance.

Table 3. Criteria for Amortizing Capital Costs of Transportation Facilities

| Contractor | Year of Initial Payment ^a |
|---|--------------------------------------|
| Alameda County Flood Control and Water Conservation District – Zone 7 | 1963 ^b |
| Alameda County Water District | 1963 |
| Antelope Valley—East Kern Water Agency | 1963 |
| Castaic Lake Water Agency | 1964 |
| City Yuba City | ^c |
| Coachella Valley Water District | 1964 |
| County of Butte | ^c |
| County of Kings | 1968 |
| Crestline-Lake Arrowhead Water Agency | 1964 |
| Desert Water Agency | 1963 ^d |
| Dudley Ridge Water District | 1968 ^e |
| Kern County Water Agency | |
| Agricultural Use | 1968 ^e |
| Municipal and Industrial Use | 1968 ^e |
| Littlerock Creek Irrigation District | 1964 |
| Metropolitan Water District of Southern California | 1963 |
| Mojave Water Agency | 1964 |
| Napa County Flood Control and Water Conservation District | 1966 |
| Oak Flat Water District | 1968 |
| Palmdale Water District | 1964 |
| Plumas County Flood Control and Water Conservation District | 1970 |
| San Bernardino Valley Municipal Water District | 1963 |
| San Gabriel Valley Municipal Water District | 1963 ^d |
| San Geronio Pass Water Agency | 1963 ^d |
| San Luis Obispo County Flood Control and Water Conservation District | 1964 ^f |
| Santa Barbara County Flood Control and Water Conservation District | 1964 |
| Santa Clara Valley Water District | 1963 |
| Solano County Water Agency | 1973 |
| Tulare Lake Basin Water Storage District | 1968 ^e |
| Ventura County Watershed Protection District | 1964 |

^a Allocated capital costs of transportation facilities amortized in equal annual installments unless otherwise noted.

^b Principal payments on each annual capital cost prior to 1971 delayed until calendar year 1972, except payments for 1963.

^c For Yuba City and Butte County payments for Delta Water Charge only.

^d Payment deferred for 1963 and added to 1964 payment with accrued interest.

^e For Dudley Ridge, Empire, Kern (agricultural use), Oak Flat, and Tulare, according to Article 45 of the contracts for supply of agricultural water, capital costs of transportation facilities allocated to agricultural water supply are amortized by using an equivalent unit rate per acre-foot applied to the annual allocations (Table B-4) through the project repayment period.

^f For San Luis Obispo and Santa Barbara County, all principal and interest payments for costs of the Coastal Stub were deferred until 1976.

Table 4. Minimum OMP&R Costs of Reach 31A Assigned Directly to Kern County Water Agency

| Year | Direct Charges |
|--------------|------------------|
| 1969 | 46,511 |
| 1970 | 46,302 |
| 1971 | 140,074 |
| 1972 | 95,017 |
| 1973 | 72,454 |
| 1974 | 100,692 |
| 1975 | 127,456 |
| 1976 | 138,504 |
| 1977 | 120,753 |
| 1978 | 157,652 |
| 1979 | 121,231 |
| 1980 | 150,728 |
| 1981 | 75,866 |
| 1982 | 82,805 |
| 1983 | 90,007 |
| 1984 | 107,468 |
| 1985 | 159,406 |
| 1986 | 137,241 |
| 1987 | 127,073 |
| 1988 | 130,924 |
| 1989 | 128,468 |
| 1990 | 138,234 |
| 1991 | 139,527 |
| 1992 | 185,370 |
| 1993 | 219,334 |
| 1994 | 364,196 |
| 1995 | 272,341 |
| 1996 | 322,123 |
| Total | 3,997,767 |

Adopted October 1, 1979, the General Bond Resolution requires that sufficient revenues be collected each year to repay all of those costs. In addition, an amount totaling 25 percent of the annual bond service is collected each year to ensure that sufficient funds are available to cover all annual costs. Any revenues collected and not needed during the year are refunded to the contractors in the next year.

Table 5 summarizes Off-Aqueduct Power Facility charges and credits related to deliveries for 2009.

Table 5. Summary of 2009 Off-Aqueduct Power Facility Charges and Credits

| Charges by Item | (Dollars) |
|--------------------------|--------------------|
| Reid Gardner Powerplant | 99,976,564 |
| Bottle Rock Powerplant | 12,321,643 |
| South Geysers Powerplant | 6,028,149 |
| <i>Subtotal</i> | <i>118,326,356</i> |
| Credits by Item | |
| Power Sales | (4,058,106) |
| Net Total Charge | 114,268,250 |

Table 6 shows projected Off-Aqueduct Power Facility charges and an amount equal to 25 percent of annual bond service for 2010 through 2029.

Annual Off-Aqueduct Power Facility charges are allocated among contractors in proportion to the electrical energy required to pump allocated water for the year. The initial allocation for the Statements of Charges is based on estimates of energy to pump requested allocated water deliveries.

An interim adjustment in the allocation of Off-Aqueduct Power costs may be made in May of each year, based on updated cost estimates and April revisions in water delivery schedules. An additional adjustment is made the following year based on actual water deliveries and actual costs for the year.

Table 6. Projected Charges for Off-Aqueduct Power Facilities

| Year | Total Annual Cost (Dollars) | 25% Bond Cover (Dollars) |
|-------------|-----------------------------|--------------------------|
| 2010 | 129,716,130 | 13,445,507 |
| 2011 | 126,560,130 | 12,830,559 |
| 2012 | 127,700,570 | 12,871,950 |
| 2013 | 73,138,878 | 7,168,276 |
| 2014 | 16,053,302 | 3,978,330 |
| 2015 | 9,387,883 | 2,340,784 |
| 2016 | 8,029,782 | 2,001,260 |
| 2017 | 7,709,104 | 1,921,090 |
| 2018 | 3,144,063 | 779,830 |
| 2019 | 3,125,134 | 775,098 |
| 2020 | 3,373,214 | 837,117 |
| 2021 | 5,304,978 | 1,320,059 |
| 2022 | 5,031,522 | 1,251,695 |
| 2023 | 3,563,907 | 884,791 |
| 2024 | 2,582,219 | 639,369 |
| 2025 | 298,496 | 68,438 |
| 2026 | 410,234 | 96,373 |
| 2027 | 675,346 | 162,651 |
| 2028 | 396,550 | 99,138 |
| 2029 | 393,550 | 98,388 |

The energy required to pump each contractor's water is calculated using the kilowatt-hour per acre-foot factors shown in *Table 7* for the pumping plants upstream from the delivery turnouts. The amounts include transmission losses.

Table 7. Kilowatt-Hour per Acre-Foot Factors for Allocating Off-Aqueduct Power Facility Costs

| Pumping Plant | kWh per acre-foot ^a | |
|---------------------------------|--------------------------------|-----------------------|
| | At Plant | Cumulative from Delta |
| Barker Slough | 223 | 223 |
| Cordelia-Benicia | 434 | 657 |
| Cordelia-Vallejo | 178 | 401 |
| Cordelia-Napa | 563 | 786 |
| Harvey O. Banks (Delta) | 296 | 296 |
| South Bay (including Del Valle) | 869 | 1,165 |
| Dos Amigos | 138 | 434 |
| Buena Vista | 242 | 676 |
| Teerink | 295 | 971 |
| Chrisman | 639 | 1,610 |
| Edmonston | 2,236 | 3,846 |
| Pearblossom | 703 | 4,549 |
| Greenspot | 871 | 5,420 |
| Crafton Hills | 1,087 | 6,507 |
| Cherry Valley | 224 | 6,731 |
| Oso | 280 | 4,126 |
| Las Perillas | 77 | 511 |
| Badger Hill | 200 | 711 |
| Devil's Den | 705 | 1,416 |
| Bluestone | 705 | 2,121 |
| Polonio Pass | 705 | 2,826 |

^aIncludes transmission losses.

Table B-17 presents a summary of actual and projected total variable OMP&R costs for each acre-foot of water conveyed through each aqueduct pumping plant and power plant for each year of the project. Following are provisions for calculating the variable OMP&R component of the Transportation Charge:

- An annual charge per acre-foot of projected water deliveries to all contractors served from or through each reach is determined so the projected variable OMP&R costs to be incurred for each reach will be returned to the State.
- The total annual variable OMP&R component for any contractor for a given reach is obtained by multiplying the unit charge associated with that reach by the quantity of water actually delivered from or through the reach to the contractor.

The data summarized in *Table B-17* are derived by dividing the costs shown in *Table B-3* by the water quantities shown in *Table B-6*. However, certain costs included in *Table B-3* for extra peaking service, which would otherwise constitute variable OMP&R costs, are assigned directly to contractors requesting this type of service (see *Bulletin 132-71*, page 21, and *Water Service Contractors Council Memo No. 593*, July 10, 1970). Those costs are excluded from the unit charges shown in *Table B-17*. Peaking charges based on additional capacity ceased in 1983. Since 1984, costs are based on market energy rates. The amounts of extra peaking charges for additional power costs are shown in *Tables 8 and 9* on pages B-22 and B-23.

The unit rates shown in *Table B-17* constitute the rates for the pumping plants and power plants listed. The cumulative rates constitute the total rates, cumulative from the Sacramento-San Joaquin Delta, and are applicable to deliveries from or downstream of the pumping plants and power plants. Extra peaking service costs are excluded.

Table B-18 shows the variable OMP&R components of the Transportation Charge for each contractor for each year of the project repayment period. *Table B-18* is developed from the costs per acre-foot

included in Table B-17 and the delivery quantities for each contractor from each reach as indicated in Table B-5A, plus any costs for extra peaking service. Those estimated components, subsequently adjusted for prior overpayments or underpayments, are included in Table F of the respective water supply contracts.

Table B-19 summarizes the annual Transportation Charges for each contractor (the sums of the corresponding amounts included in Tables B-15, B-16A, B-16B, and B-18). Those estimated payments, subsequently adjusted for prior overpayments or underpayments, are set forth in Table G of the respective water supply contracts.

In accordance with provisions of the Devil Canyon-Castaic contract, Table B-19 and Table G include amounts of debt service and operating cost payments due from the six contractors located down-aqueduct from Devil Canyon and Castaic powerplants.

Delta Water Charges

Table B-20A presents the calculation of the Delta Water Rate for the initial Conservation Facilities applicable in 2011 in accordance with the amended Article 22(e) and 22(g) of all 29 contracts. The Delta Water Rate was calculated at a Project Interest Rate of 4.608 percent, based on Conservation Facility costs shown in Table B-13. That Delta Water Rate is used to compute projected Delta Water Charges under Article 53(i) for the contractors who have executed the Monterey Amendment. Included in Table B-20A is the Delta Water Rate for the two contractors who have not executed the Monterey Amendment (Plumas County and Empire).

Table B-20B shows each component of the 2011 Delta Water Rate from Table B-20A.

Table B-21 summarizes the annual Delta Water Charge for each contractor. The projected charges in Table B-21 are developed by multiplying the total rate per acre-foot, as shown in Table B-20A, by the amount of allocated water for each contractor, as shown in Table B-4.

The projected Delta Water Charges from 2011-2035 include the following assumptions:

1. *Escalation of projected operating costs at 2.5 percent per year for 2011 and 2012.*
2. *Escalation of projected operating costs at one percent per year for 2013-2035.*

Water System Revenue Bond Surcharge

Table B-22 summarizes the Water System Revenue Bond Surcharge (WSRB) to the Delta Water Charge and the transportation capital cost component for each contractor. The surcharge shown in Table B-22 includes the financing costs of the WSRB surcharge, series B through AE. This surcharge is levied according to an amendment to the water supply contracts, which was signed by all long-term water supply contractors.

Total Water Charges

Table B-23 summarizes the total annual charges to each contractor (the sum of the Transportation Charge in Table B-19, the Delta Water Charge in Table B-21, and the Water System Revenue Bond Surcharge in Table B-22). The charges do not reflect past payments by contractors and are unadjusted for prior overpayments or underpayments.

Table 8. Extra Peaking Charges for Additional Power, by Pumping Plant (Dollars)

| Year | Cordelia Napa | Cordelia Solano | Barker Slough | South Bay | Banks | Dos Amigos | Las Perillas and Badger Hill | Buena Vista | Teerink | Chrisman | Edmonston | Pearlblossom | Oso | Total |
|-------|---------------|-----------------|---------------|-----------|-----------|------------|------------------------------|-------------|---------|----------|-----------|--------------|-----|-----------|
| 1972 | 0 | 0 | 0 | 0 | 0 | 10,579 | 24,700 | 0 | 0 | 0 | 0 | 0 | 0 | 35,279 |
| 1973 | 0 | 0 | 0 | 0 | 0 | 0 | 6,016 | 0 | 0 | 0 | 0 | 0 | 0 | 6,016 |
| 1974 | 0 | 0 | 0 | 0 | 0 | 0 | 7,140 | 0 | 0 | 0 | 0 | 0 | 0 | 7,140 |
| 1975 | 0 | 0 | 0 | 0 | 0 | 494 | 6,397 | 0 | 0 | 0 | 0 | 0 | 0 | 6,891 |
| 1976 | 0 | 0 | 0 | 0 | 0 | 0 | 1,981 | 0 | 0 | 0 | 0 | 0 | 0 | 1,981 |
| 1977 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1978 | 0 | 0 | 0 | 0 | 0 | 45,145 | 3,680 | 0 | 0 | 0 | 0 | 0 | 0 | 48,825 |
| 1979 | 0 | 0 | 0 | 0 | 0 | 0 | 3,306 | 0 | 0 | 0 | 0 | 0 | 0 | 3,306 |
| 1980 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1981 | 0 | 0 | 0 | 0 | 0 | 12,126 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12,126 |
| 1982 | 0 | 0 | 0 | 0 | 0 | 89,339 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 89,339 |
| 1983 | 0 | 0 | 0 | 35 | 7,594 | 3,534 | 152 | 0 | 0 | 0 | 0 | 0 | 0 | 11,315 |
| 1984 | 0 | 0 | 0 | 2,096 | 84,396 | 38,607 | 7,203 | 11,173 | 3,823 | 3,593 | 0 | 0 | 0 | 150,891 |
| 1985 | 0 | 0 | 0 | 1,480 | 19,612 | 8,841 | 763 | 4,488 | 4,412 | 8,929 | 28,353 | 0 | 0 | 76,878 |
| 1986 | 0 | 0 | 0 | 0 | 1,864 | 863 | 0 | 291 | 354 | 766 | 2,683 | 0 | 0 | 6,821 |
| 1987 | 0 | 0 | 0 | 604 | 17,129 | 7,838 | 835 | 2,295 | 1,806 | 3,460 | 11,058 | 0 | 0 | 45,025 |
| 1988 | 639 | 39 | 287 | 894 | 43,475 | 20,082 | 2,213 | 5,792 | 4,367 | 8,272 | 25,886 | 0 | 0 | 111,946 |
| 1989 | 2,491 | 566 | 1,483 | 70 | 40,251 | 18,642 | 1,935 | 3,401 | 1,531 | 2,058 | 3,793 | 0 | 0 | 76,221 |
| 1990 | 45 | 0 | 18 | 343 | 19,524 | 9,044 | 0 | 150 | 145 | 314 | 643 | 0 | 0 | 30,226 |
| 1991 | 903 | 0 | 281 | 0 | 21 | 8 | 0 | 15 | 17 | 39 | 139 | 41 | 0 | 1,464 |
| 1992 | 208 | 117 | 203 | 0 | 7,070 | 2,502 | 0 | 182 | 190 | 435 | 0 | 0 | 0 | 10,907 |
| 1993 | 0 | 681 | 889 | 4,483 | 123,080 | 54,741 | 0 | 8,898 | 5,458 | 10,900 | 35,068 | 11,139 | 0 | 255,337 |
| 1994 | 0 | 366 | 393 | 679 | 6,566 | 2,795 | 454 | 1,083 | 155 | 357 | 1,121 | 0 | 132 | 14,101 |
| 1995 | 0 | 0 | 0 | 1,717 | 24,464 | 9,422 | 27 | 1,865 | 3,475 | 782 | 1,104 | 400 | 0 | 43,256 |
| 1996 | 4 | 0 | 1 | 1,983 | 10,031 | 4,976 | 0 | 391 | 432 | 1,015 | 3,404 | 1,160 | 0 | 23,397 |
| 1997 | 0 | 1,780 | 2,152 | 3,107 | 337,357 | 165,774 | 1,753 | 34,604 | 12,296 | 15,910 | 21,028 | 0 | 0 | 595,761 |
| 1998 | 0 | 0 | 0 | 20,966 | 235,693 | 106,251 | 2,354 | 697 | 848 | 1,836 | 6,426 | 0 | 0 | 375,071 |
| 1999 | 0 | 0 | 0 | 0 | 63,196 | 26,235 | 0 | 3,394 | 4,136 | 8,959 | 31,350 | 7,740 | 0 | 145,010 |
| 2000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2004 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2005 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2006 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2007 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2008 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2009 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 4,290 | 3,549 | 5,707 | 38,457 | 1,041,323 | 637,838 | 70,909 | 78,719 | 43,445 | 67,625 | 172,056 | 20,480 | 132 | 2,184,530 |

Table 9. Extra Peaking Charges for Additional Power, by Contractor (Dollars)

| Year | Napa | Solano | Alameda Zone 7 | Alameda County | Santa Clara | Dudley Ridge | Empire | Kern | Kings | Oak Flat | Tulare | AVEK | Castaic Lake | Coachella | Desert | Littlerock | Palmdale | San Gabriel | Total |
|-------|-------|--------|-------------------|-------------------|----------------|-----------------|--------|-----------|-------|----------|---------|---------|-----------------|-----------|--------|------------|----------|----------------|-----------|
| 1972 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 35,269 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 35,279 |
| 1973 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6,016 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6,016 |
| 1974 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7,140 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7,140 |
| 1975 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6,891 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6,891 |
| 1976 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,981 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,981 |
| 1977 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1978 | 0 | 0 | 0 | 0 | 0 | 2,035 | 0 | 44,484 | 42 | 0 | 0 | 2,264 | 0 | 0 | 0 | 0 | 0 | 0 | 48,825 |
| 1979 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,821 | 0 | 0 | 0 | 0 | 485 | 0 | 0 | 0 | 0 | 0 | 3,306 |
| 1980 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1981 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11,951 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 175 | 0 | 0 | 12,126 |
| 1982 | 0 | 0 | 0 | 0 | 0 | 2,173 | 0 | 80,945 | 0 | 0 | 0 | 4,671 | 1,128 | 0 | 0 | 0 | 0 | 422 | 89,339 |
| 1983 | 0 | 0 | 0 | 0 | 48 | 9,511 | 0 | 0 | 1,365 | 0 | 0 | 0 | 391 | 0 | 0 | 0 | 0 | 0 | 11,315 |
| 1984 | 0 | 0 | 0 | 0 | 2,874 | 0 | 0 | 144,021 | 281 | 809 | 0 | 0 | 2,906 | 0 | 0 | 0 | 0 | 0 | 150,891 |
| 1985 | 0 | 0 | 0 | 2,029 | 0 | 0 | 64 | 25,664 | 0 | 98 | 0 | 48,767 | 256 | 0 | 0 | 0 | 0 | 0 | 76,878 |
| 1986 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 2,194 | 4,614 | 0 | 0 | 0 | 0 | 0 | 0 | 6,821 |
| 1987 | 0 | 0 | 229 | 0 | 599 | 313 | 84 | 24,141 | 0 | 95 | 0 | 18,207 | 545 | 0 | 0 | 812 | 0 | 0 | 45,025 |
| 1988 | 892 | 73 | 665 | 561 | 0 | 1,853 | 1,404 | 58,905 | 0 | 72 | 2,368 | 44,526 | 627 | 0 | 0 | 0 | 0 | 0 | 111,946 |
| 1989 | 3,478 | 1,062 | 96 | 0 | 0 | 13 | 403 | 55,085 | 0 | 239 | 8,278 | 0 | 1,043 | 0 | 0 | 1,035 | 5,489 | 0 | 76,221 |
| 1990 | 63 | 0 | 470 | 0 | 0 | 0 | 0 | 28,587 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 81 | 1,025 | 0 | 30,226 |
| 1991 | 1,184 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 280 | 0 | 0 | 1,464 |
| 1992 | 271 | 257 | 0 | 0 | 0 | 0 | 49 | 10,109 | 221 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10,907 |
| 1993 | 0 | 1,570 | 6,122 | 0 | 0 | 0 | 3,757 | 97,812 | 504 | 0 | 74,577 | 0 | 0 | 24,983 | 41,156 | 0 | 4,856 | 0 | 255,337 |
| 1994 | 0 | 759 | 896 | 0 | 0 | 0 | 7 | 9,933 | 0 | 0 | 0 | 0 | 2,450 | 0 | 0 | 56 | 0 | 0 | 14,101 |
| 1995 | 0 | 0 | 2,353 | 0 | 0 | 10,197 | 0 | 28,085 | 310 | 0 | 0 | 0 | 27 | 0 | 0 | 0 | 2,284 | 0 | 43,256 |
| 1996 | 5 | 0 | 81 | 2,612 | 0 | 334 | 205 | 4,552 | 969 | 0 | 7,809 | 0 | 0 | 0 | 0 | 0 | 3,598 | 3,232 | 23,397 |
| 1997 | 0 | 3,932 | 3,999 | 0 | 0 | 6,190 | 0 | 546,733 | 0 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 34,867 | 0 | 595,761 |
| 1998 | 0 | 0 | 19,666 | 8,442 | 0 | 22,631 | 1 | 312,626 | 0 | 651 | 0 | 0 | 0 | 0 | 0 | 0 | 11,054 | 0 | 375,071 |
| 1999 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 76,425 | 0 | 0 | 6,922 | 0 | 0 | 0 | 0 | 0 | 11,576 | 50,087 | 145,010 |
| 2000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2004 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2005 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2006 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2007 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2008 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2009 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 5,893 | 7,653 | 34,577 | 13,644 | 3,521 | 55,250 | 5,974 | 1,620,176 | 3,692 | 2,017 | 102,158 | 123,049 | 9,858 | 24,983 | 41,156 | 2,439 | 74,749 | 53,741 | 2,184,530 |

Equivalent Total Water Charges

Table B-24 presents the Transportation Charge and Delta Water Charge in terms of the equivalent unit charge for each acre-foot of allocated water now projected for delivery to the respective contractors.

These equivalent charges would provide the same principal sum at the end of the project repayment period as annual payments to be made as part of the Delta Water Charge and Transportation Charge, plus interest at the Project Interest Rate, if applied to each acre-foot of allocated water delivered to date; all surplus water delivered prior to May 1, 1973; all Article 21 water deliveries in 1994 and after; and all allocated water now projected to be delivered during the remainder of the project repayment period (*Table B-5B*).

The equivalent unit Delta Water Charges included in *Table B-24* are greater than those in *Table B-20A* because current projections of allocated water service are less for most contractors than the amounts shown in *Table A*.

Equivalent Water Costs by Reach

Table B-25 presents a summary of the equivalent unit transportation cost of conveying allocated water through respective aqueduct reaches of the Project Transportation Facilities.

Those unit costs provide the basis of charges assessed for extra service (such as delivery of allocations down-aqueduct from a contractor's turnout) and for wheeling service to entities other than the long-term water supply contractors.

The cumulative unit conveyance costs indicated for reaches in *Table B-25* do not necessarily equal the equivalent unit Transportation Charges to contractors

served from such reaches. The unit charges in *Table B-24* account for the rate of water demand buildup and cost allocation factors of the individual contractors; however, the unit costs included in *Table B-25* reflect the effect of melding the respective buildups and allocation criteria of all contractors whose allocations are conveyed through a given reach. *Table B-25* also includes surplus water delivered prior to May 1, 1973, and Article 21 water deliveries in 1994 and afterwards.

East Branch Enlargement Facility Charges

Table B-26 reflects DWR's projection of annual capital costs of the East Branch Enlargement Facilities for each aqueduct reach. These projections will be redetermined in future bulletins to include the following:

- A reallocation of costs of constructing the present east branch facilities between Alamo Powerplant and Silverwood Lake;
- A reallocation of costs of Silverwood Lake to reflect additional use as a result of East Branch Enlargement operation;
- A reallocation of costs of San Bernardino Tunnel to reflect redistribution of flow capacities necessary for the East Branch Enlargement facilities; and
- Actual enlargement construction costs.

These costs will be recovered with interest from the seven Southern California water contractors participating in the enlargement, in accordance with their amended water supply contracts (see *Table 10*).

Table B-27 lists the projected minimum OMP&R costs for each reach of the enlargement to be repaid by the seven East Branch Enlargement participating contractors. Currently, this table includes only minimum OMP&R costs attributable

to the East Branch Enlargement. In accordance with Article 49(e)(1), the contractors participating in the East Branch Enlargement will also share in the remaining minimum OMP&R costs of the affected reaches, in accordance with a formula developed by DWR in consultation with the affected contractors.

Table B-28 shows each participating contractor's share of the estimated capital costs of the East Branch Enlargement shown in *Table B-26*.

Table B-29 shows the amounts of the annual capital cost components of the East Branch Enlargement Transportation Charge for each participating contractor. This component consists of each contractor's allocated share of debt service on bonds sold to finance the enlargement.

Table B-30 shows the minimum OMP&R components of the East Branch Enlargement Transportation Charge for each participating contractor for each year of the project repayment period. The amounts shown in *Table B-30* will recover the minimum OMP&R costs shown in *Table B-27*.

Table B-31 shows the annual East Branch Enlargement Transportation charges for each participating contractor (the sum of the corresponding amounts included in *Tables B-29* and *B-30*).

East Branch Extension Phase I Facility Charges

The East Branch Extension-Phase I charges recover associated costs for East Branch Extension facilities beginning at Devil Canyon Powerplant Afterbay and extending to the terminus at Noble Creek in the vicinity of Beaumont, Riverside County. These costs will be recovered from two contractors—

San Bernardino and San Geronio—in accordance with their amended Water Supply contracts. The factors for distributing costs are shown in *Table 11*. *Table 12* shows the debt service for 2011.

Short-Term Agreements

DWR and the long-term water supply contractors execute short-term agreements that affect the contractors' charges. DWR executed a five-year agreement in 1997 with 16 municipal and industrial contractors, who agreed to pay for allocated shares of Municipal Water Quality Investigations costs. In 2002, 2006 and 2008, additional amendments were executed to extend the program, with a 2010 amendment pending. The MWQI charges under this agreement are included in the transportation minimum OMP&R components shown in *Table B-16A*.

Nine contractors executed a short-term agreement (1997 and 1998) to participate in the feasibility study for the American Basin conjunctive-use program. Feasibility study costs are included in *Table B-16A*.

Contractors have agreed to participate in several Delta Improvement programs that started in 2007 and that will possibly extend into the future.

The first contract pertains to the Bay Delta Conservation Plan (BDCP) agreed to in the Memorandum of Agreement for Supplemental Funding for Certain Ecosystem Actions and Support for Implementation of Near-Term Water Supply, Water Quality, Ecosystem, and Levee Actions (MOA). The BDCP comprises two elements: fishery costs and consultation costs. These costs were added to the contractors' transportation minimum component for bill years 2007, through 2011.

The second contract pertains to the non-BDCP costs of the MOA, comprising the Delta Vision and pelagic organism decline research costs. These costs were added to the contractors' conservation minimum component for bill years 2007 and 2008.

The third contract pertains to the Delta Habitat Conservation and Conveyance Program (DHCCP), agreed to in funding agreements between the Department and participating contractors to provide funding for the preliminary planning phase of an improved Delta water conveyance facility. This program will assess potential habitat restoration and water conveyance options in the Delta. Charges associated with the DHCCP are billed directly to those participating contractors as a separate line item in the Statements of Charges and are not reflected in the tables in this appendix.

Table 10. Determination of Factors for Distributing Capital and Minimum OMP&R Costs of East Branch Enlargement Facilities among Participating Contractors

| Reach Number | Description |
|--------------|---|
| 18A | Junction, West Branch, California Aqueduct, through Alamo Powerplant |
| 19 | Alamo Powerplant to Fairmont |
| 20A | Fairmont through 70th Street West |
| 20B | 70th Street West to Palmdale |
| 21 | Palmdale to Littlerock Creek |
| 22A | Littlerock Creek to Pearblossom Pumping Plant |
| 22B | Pearblossom Pumping Plant to West Fork Mojave River |
| 23B | West Fork Mojave River to Silverwood Lake (excluding Mojave Siphon Powerplant facilities) |
| 23C | Mojave Siphon Powerplant facilities |
| 24 | Cedar Springs Dam and Silverwood Lake |
| 25 | Silverwood Lake to South Portal, San Bernardino Tunnel |
| 26A | South Portal, San Bernardino Tunnel through Devil Canyon Powerplant |
| 26B | Devil Canyon Powerplant Bypass |

Share of Enlargement Capacity (cfs)

| Reach Number | Antelope Valley-East Kern Water Agency | Coachella Valley Water District | Desert Water Agency | Mojave Water Agency | Palmdale Water District | San Bernardino Valley Municipal Water District | Metropolitan Water District of Southern California | Total |
|--------------|--|---------------------------------|---------------------|---------------------|-------------------------|--|--|-------|
| 18A | | 151 | 13 | 136 | 6 | | 1,200 | 1,506 |
| 19 | | 151 | 13 | 136 | 6 | | 1,200 | 1,506 |
| 20A | 35 | 151 | 13 | 136 | 6 | | 1,200 | 1,541 |
| 20B | 35 | 151 | 13 | 136 | 6 | | 1,200 | 1,541 |
| 21 | 35 | 151 | 13 | 136 | | | 1,200 | 1,535 |
| 22A | 35 | 151 | 13 | 136 | | | 1,200 | 1,535 |
| 22B | | 151 | 13 | 136 | | | 1,200 | 1,500 |
| 23B | | 184 | 67 | 212 | | | 1,200 | 1,663 |
| 23C | | 184 | 67 | | | | 1,200 | 1,451 |
| 24 | | 190 | 78 | | | | 1,200 | 1,468 |
| 25 | | 193 | 83 | | | 63 | 1,200 | 1,539 |
| 26A | | 193 | 83 | | | 63 | 1,200 | 1,539 |
| 26B | | | | | | | 300 | 300 |

Factors for Distributing Capital and Minimum OMP&R Costs of East Branch Enlargement Facilities (flow ratios)

| Reach Number | Antelope Valley-East Kern Water Agency | Coachella Valley Water District | Desert Water Agency | Mojave Water Agency | Palmdale Water District | San Bernardino Valley Municipal Water District | Metropolitan Water District of Southern California | Total |
|--------------|--|---------------------------------|---------------------|---------------------|-------------------------|--|--|------------|
| 18A | 0.00000000 | 0.10026560 | 0.00863214 | 0.09030544 | 0.00398406 | 0.00000000 | 0.79681276 | 1.00000000 |
| 19 | 0.00000000 | 0.10026560 | 0.00863214 | 0.09030544 | 0.00398406 | 0.00000000 | 0.79681276 | 1.00000000 |
| 20A | 0.02271252 | 0.09798832 | 0.00843608 | 0.08825438 | 0.00398358 | 0.00000000 | 0.77871512 | 1.00000000 |
| 20B | 0.02271252 | 0.09798832 | 0.00843608 | 0.08825438 | 0.00398358 | 0.00000000 | 0.77871512 | 1.00000000 |
| 21 | 0.02280130 | 0.09837134 | 0.00846906 | 0.08859935 | 0.00000000 | 0.00000000 | 0.78175895 | 1.00000000 |
| 22A | 0.02280130 | 0.09837134 | 0.00846906 | 0.08859935 | 0.00000000 | 0.00000000 | 0.78175895 | 1.00000000 |
| 22B | 0.00000000 | 0.10066667 | 0.00866667 | 0.09066667 | 0.00000000 | 0.00000000 | 0.79999999 | 1.00000000 |
| 23B | 0.00000000 | 0.11064342 | 0.04028863 | 0.12748046 | 0.00000000 | 0.00000000 | 0.72158749 | 1.00000000 |
| 23C | 0.00000000 | 0.12680910 | 0.04617505 | 0.00000000 | 0.00000000 | 0.00000000 | 0.82701585 | 1.00000000 |
| 24 | 0.00000000 | 0.12942779 | 0.05313351 | 0.00000000 | 0.00000000 | 0.00000000 | 0.81743870 | 1.00000000 |
| 25 | 0.00000000 | 0.12540611 | 0.05393112 | 0.00000000 | 0.00000000 | 0.04093567 | 0.77972710 | 1.00000000 |
| 26A | 0.00000000 | 0.12540611 | 0.05393112 | 0.00000000 | 0.00000000 | 0.04093567 | 0.77972710 | 1.00000000 |
| 26B | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 0.00000000 | 1.00000000 | 1.00000000 |

Table 11. Factors for Distributing Capital and Minimum OMP&R Costs of the East Branch Extension Facilities

| Reach Number | Reach Description | San Bernardino Municipal Water District | San Gorgonio Pass Water Agency | Total |
|----------------|--|---|--------------------------------|----------|
| Capital | | | | |
| all | Average of the contractors' participation of EBX facilities | 0.458417 | 0.541583 | 1.000000 |
| Minimum | | | | |
| 1 | Devil Canyon Powerplant to Junction, Foothill Pipeline near Cone Camp Road | 0.557330 | 0.442670 | 1.000000 |
| 2A | Junction Foothill Pipeline near Cone Camp Rd to Greenspot Pump Station | 0.557330 | 0.442670 | 1.000000 |
| 2B | Greenspot Pump Station to Morton Canyon Valve Vault | 0.777778 | 0.222222 | 1.000000 |
| 2C | Morton Canyon Valve Vault to Crafton Hills Pump Station | 0.777778 | 0.222222 | 1.000000 |
| 3A | Crafton Hills Pump Station to Carter Street Valve Vault | 0.557330 | 0.442670 | 1.000000 |
| 3B | Carter Street Valve Vault to Garden Air Creek, South of San Bernardino County Line | 0.557330 | 0.442670 | 1.000000 |
| 4A | Garden Air Creek to Cherry Valley Pump Station | | 1.000000 | 1.000000 |
| 4B | Cherry Valley Pump Station to Terminus at Noble Creek | | 1.000000 | 1.000000 |

Table 12. East Branch Extension Facilities Debt Service for 2011

| Contractor | Share of Participation (%) | Total Debt Service Charge (Dollars) |
|----------------|----------------------------|-------------------------------------|
| San Bernardino | 45.84170 | 6,140,662 |
| San Gorgonio | 54.15830 | 7,254,701 |
| Total | 100.00000 | 13,395,363 |

Tables B-1 through B-31

Note: Where applicable, the projected data values shown in this appendix are shaded and the bill year data are in **bold** type.

TABLE B-1. Factors for Distributing Reach Capital Costs among Contractors

Sheet 1 of 2

| Reach No. | Reach Description | NORTH BAY AREA | | SOUTH BAY AREA | | | | Total |
|-----------|--|-----------------------|---------------------|-------------------------------------|-------------------------------------|---|--------------------------------|------------|
| | | Napa County FC&WCD | Solano County WA | Alameda County FC&WCD, Zone 7 | Alameda County Water District | Santa Clara Valley Water District | Future Contractor South Bay | |
| | NORTH BAY AQUEDUCT | | | | | | | |
| 1 | Barker Slough thru Fairfield/Vacaville Turnout | 0.29667896 | 0.70332104 | | | | | 1.00000000 |
| 2 | Fairfield/Vacaville Turnout to Cordelia Forebay | 0.38414552 | 0.61585448 | | | | | 1.00000000 |
| 3A | Cordelia Forebay thru Benicia and Vallejo Turnouts | | 1.00000000 | | | | | 1.00000000 |
| 3B | Cordelia Forebay thru Napa Turnout Reservoir | 1.00000000 | | | | | | 1.00000000 |
| | SOUTH BAY AQUEDUCT | | | | | | | |
| 1 | Bethany Reservoir thru Altamont Turnout | | | 0.22599612 | 0.20663021 | 0.49237700 | 0.07499667 | 1.00000000 |
| 2 | Altamont Turnout thru Patterson Reservoir | | | 0.22599658 | 0.20663059 | 0.49237783 | 0.07499500 | 1.00000000 |
| 4 | Patterson Reservoir to Del Valle Junction | | | 0.19504795 | 0.21450017 | 0.51113249 | 0.07931939 | 1.00000000 |
| 5 | Del Valle Junction thru Lake del Valle | | | 0.14436367 | 0.12972254 | 0.33715573 | 0.38875806 | 1.00000000 |
| 6 | Del Valle Junction thru South Livermore Turnout | | | 0.14599918 | 0.21144710 | 0.50574745 | 0.13680627 | 1.00000000 |
| 7 | South Livermore Turnout thru Vallecitos Turnout | | | | 0.25176680 | 0.60218448 | 0.14604872 | 1.00000000 |
| 8 | Vallecitos Turnout thru Alameda-Bayside Turnout | | | | 0.27934645 | 0.72065355 | | 1.00000000 |
| 9 | Alameda-Bayside Turnout thru Santa Clara Terminal Facilities | | | | | 1.00000000 | | 1.00000000 |
| | CALIFORNIA AQUEDUCT | | | | | | | |
| 1 | Delta thru Bethany Reservoir | | | 0.00954737 | 0.00872917 | 0.02080118 | 0.00342507 | N/A |

| Reach No. | Reach Description | CENTRAL | | SOUTHERN CALIFORNIA AREA | | | | | |
|-----------|--|----------------------------------|--------------------------------|---|------------------------------|------------------------------------|--|------------------------|--|
| | | COASTAL AREA | | Antelope Valley- East Kern Water Agency | Castaic Lake Water Agency | Coachella Valley Water District | Crestline- Lake Arrowhead Water Agency | Desert Water Agency | |
| | | San Luis Obispo County FC&WCD | Santa Barbara County FC&WCD | | | | | | |
| 1 | Delta thru Bethany Reservoir | 0.00533010 | 0.00983337 | 0.02939084 | 0.01285827 | 0.00528315 | 0.00133612 | 0.00871300 | |
| 2A | Bethany Reservoir to Orestimba Creek | 0.00557213 | 0.01027988 | 0.03072531 | 0.01343201 | 0.00552068 | 0.00139620 | 0.00910474 | |
| 2B | Orestimba Creek to O'Neill Forebay | 0.00557824 | 0.01029119 | 0.03075915 | 0.01345351 | 0.00552831 | 0.00139814 | 0.00911733 | |
| 3 | O'Neill Forebay to Dos Amigos Pumping Plant | 0.00557719 | 0.01028923 | 0.03075332 | 0.01345294 | 0.00552772 | 0.00139798 | 0.00911637 | |
| 4 | Dos Amigos Pumping Plant to Panoche Creek | 0.00557607 | 0.01028717 | 0.03074719 | 0.01345233 | 0.00552710 | 0.00139784 | 0.00911536 | |
| 5 | Panoche Creek to Five Points | 0.00557467 | 0.01028462 | 0.03073954 | 0.01345157 | 0.00552633 | 0.00139763 | 0.00911409 | |
| 6 | Five Points to Arroyo Pasajero | 0.00557257 | 0.01028074 | 0.03072799 | 0.01345042 | 0.00552517 | 0.00139733 | 0.00911216 | |
| 7 | Arroyo Pasajero to Kettleman City | 0.00557189 | 0.01027949 | 0.03072428 | 0.01345006 | 0.00552480 | 0.00139723 | 0.00911154 | |
| 8C | Kettleman City thru Milham Avenue | 0.00557103 | 0.01027792 | 0.03071961 | 0.01344960 | 0.00552432 | 0.00139712 | 0.00911076 | |
| 8D | Milham Avenue thru Avenal Gap | 0.00568611 | 0.01049020 | 0.03135418 | 0.01373353 | 0.00563986 | 0.00142632 | 0.00930130 | |
| 9 | Avenal Gap thru Twisselman Road | | | 0.03426625 | 0.01356094 | 0.00616886 | 0.00156011 | 0.01017373 | |
| 10A | Twisselman Road thru Lost Hills | | | 0.03481391 | 0.01377767 | 0.00626946 | 0.00158556 | 0.01033963 | |
| 11B | Lost Hills to 7th Standard Road | | | 0.03835043 | 0.01517717 | 0.00691699 | 0.00174933 | 0.01140749 | |
| 12D | 7th Standard Road thru Elk Hills Road | | | 0.04031661 | 0.01595523 | 0.00727790 | 0.00184059 | 0.01200265 | |
| 12E | Elk Hills Road thru Tupman Road | | | 0.04037074 | 0.01597665 | 0.00728878 | 0.00184332 | 0.01202059 | |
| 13B | Tupman Road to Buena Vista Pumping Plant | | | 0.04379882 | 0.01733322 | 0.00791595 | 0.00200194 | 0.01305492 | |
| 14A | Buena Vista Pumping Plant thru Santiago Creek | | | 0.04599268 | 0.01820137 | 0.00831952 | 0.00210399 | 0.01372049 | |
| 14B | Santiago Creek thru Old River Road | | | 0.04682530 | 0.01853084 | 0.00847388 | 0.00214303 | 0.01397505 | |
| 14C | Old River Road to Wheeler Ridge Pumping Plant | | | 0.04825217 | 0.01909545 | 0.00873768 | 0.00220973 | 0.01441013 | |
| 15A | Wheeler Ridge Pumping Plant to Chrisman Pumping Plant | | | 0.04905609 | 0.01941356 | 0.00888679 | 0.00224744 | 0.01465600 | |
| 16A | Chrisman Pumping Plant to Edmonston Pumping Plant | | | 0.05089794 | 0.02014241 | 0.00922722 | 0.00233351 | 0.01521742 | |
| 17E | Edmonston Pumping Plant to Porter Tunnel | | | 0.05329388 | 0.02109050 | 0.00967107 | 0.00244575 | 0.01594937 | |
| 17F | Porter Tunnel to Junction, West Branch, Calif. Aqueduct | | | 0.05340725 | 0.02113537 | 0.00969176 | 0.00245098 | 0.01598349 | |
| 18A | Junction, West Branch, Calif. Aqueduct thru Alamo Pwp. | | | 0.13238112 | | 0.02399391 | 0.00606795 | 0.03957043 | |
| 19 | Alamo Powerplant to Fairmont | | | 0.13237766 | | 0.02399451 | 0.00606811 | 0.03957141 | |
| 19C | Buttes Junction thru Buttes Reservoir | | | 1.00000000 | | | | | |
| 20A | Fairmont thru 70th Street West | | | 0.06847931 | | 0.02576425 | 0.00651573 | 0.04249001 | |
| 20B | 70th Street West to Palmdale | | | 0.02276024 | | 0.02702917 | 0.00683555 | 0.04457607 | |
| 21 | Palmdale to Littlerock Creek | | | 0.02318952 | | 0.02754716 | 0.00696651 | 0.04543034 | |
| 22A | Littlerock Creek to Pearlblossom Pumping Plant | | | 0.01181870 | | 0.02794143 | 0.00706621 | 0.04608043 | |
| 22B | Pearlblossom Pumping Plant to West Fork Mojave River | | | | | 0.02827552 | 0.00715074 | 0.04663153 | |
| 23 | West Fork Mojave River to Silverwood Lake | | | | | 0.00324449 | 0.00818122 | 0.00535117 | |
| 24 | Cedar Springs Dam and Silverwood Lake | | | | | 0.01024605 | 0.01251569 | 0.01690478 | |
| 25 | Silverwood Lake to South Portal San Bernardino Tunnel | | | | | | | | |
| 26A | South Portal, San Bernardino Tunnel thru Devil Canyon Pwp. | | | | | | | | |
| 28G | Devil Canyon Powerplant to Barton Road | | | | | | | | |
| 28H | Barton Road to Lake Perris | | | | | | | | |
| 28J | Perris Dam and Lake Perris | | | | | | | | |
| 29A | Junction, West Branch, Calif. Aqueduct thru Oso P. P. | | | | 0.03544337 | | | | |
| 29F | Oso Pumping Plant thru Quail Embankment | | | | 0.03544339 | | | | |
| 29G | Quail Embankment thru Warne Powerplant | | | | 0.03544339 | | | | |
| 29H | Pyramid Dam and Lake | | | | 0.02817144 | | | | |
| 29J | Pyramid Lake thru Castaic Powerplant | | | | 0.03544338 | | | | |
| 30 | Castaic Dam and Lake | | | | 0.02927284 | | | | |
| 31A | Avenal Gap to Devil's Den Pumping Plant | 0.10560301 | 0.19482503 | | 0.07364766 | | | | |
| 33A | Devil's Den Pumping Plant through Tank 1 | 0.10101221 | 0.89898779 | | | | | | |
| 33B | Tank 1 through Chorro Valley Turnout | 0.09912818 | 0.90087182 | | | | | | |
| 34 | Chorro Valley Turnout through Lopez Turnout | 0.05479573 | 0.94520427 | | | | | | |
| 35 | Lopez Turnout through Guadalupe Turnout | | 1.00000000 | | | | | | |

Note: Proportionate use factors **do not** reflect permanent water transfer as a result of the Monterey Amendment.

TABLE B-1. Factors for Distributing Reach Capital Costs among Contractors

Sheet 2 of 2

| Reach No. | SAN JOAQUIN VALLEY AREA | | | | | | | |
|--------------|-----------------------------------|---|---|--------------------------------|--------------|-----------------------|-------------------------------|---|
| | Dudley Ridge Water District | Empire West Side Irrigation District | Future Contractor San Joaquin Valley | Kern County Water Agency | | County of Kings | Oak Flat Water District | Tulare Lake Basin Water Storage District |
| | | | | Municipal and Industrial | Agricultural | | | |
| | | | | | | | | |
| CA-AQ | | | | | | | | |
| 1 | 0.01707770 | 0.00088678 | 0.00254693 | 0.02741768 | 0.30629913 | 0.00090695 | | 0.03504975 |
| 2A | 0.01781031 | 0.00092482 | 0.00266258 | 0.02864263 | 0.31945188 | 0.00094747 | 0.00174288 | 0.03655331 |
| 2B | 0.01785838 | 0.00092731 | 0.00266550 | 0.02868743 | 0.32030556 | 0.00094896 | | 0.03665201 |
| 3 | 0.01786337 | 0.00092757 | 0.00266499 | 0.02868589 | 0.32039254 | 0.00094892 | | 0.03666225 |
| 4 | 0.01786863 | 0.00092785 | 0.00266446 | 0.02868428 | 0.32048398 | 0.00094886 | | 0.03667303 |
| 5 | 0.01787517 | 0.00092819 | 0.00266380 | 0.02868227 | 0.32059816 | 0.00094879 | | 0.03668649 |
| 6 | 0.01788508 | 0.00092870 | 0.00266279 | 0.02867923 | 0.32077093 | 0.00094868 | | 0.03670685 |
| 7 | 0.01788826 | 0.00092887 | 0.00266246 | 0.02867825 | 0.32082633 | 0.00094864 | | 0.03671338 |
| 8C | 0.01789228 | 0.00092909 | 0.00266205 | 0.02867702 | 0.32089625 | 0.00094859 | | 0.03672162 |
| 8D | 0.01828779 | | 0.00271703 | 0.02928147 | 0.32798200 | | | 0.01820857 |
| 9 | | | | 0.03204523 | 0.32739538 | | | |
| 10A | | | | 0.03257442 | 0.31658608 | | | |
| 11B | | | | 0.03597398 | 0.24684668 | | | |
| 12D | | | | 0.03787171 | 0.20804762 | | | |
| 12E | | | | 0.03793198 | 0.20695175 | | | |
| 13B | | | | 0.01458796 | 0.16600071 | | | |
| 14A | | | | 0.00620338 | 0.13319181 | | | |
| 14B | | | | 0.00632023 | 0.11741558 | | | |
| 14C | | | | 0.00651962 | 0.09039633 | | | |
| 15A | | | | 0.00663252 | 0.07516317 | | | |
| 16A | | | | 0.00688973 | 0.04028829 | | | |
| 17E | | | | 0.00212516 | | | | |
| 31A | | | 0.05046240 | | 0.57546190 | | | |

| SOUTHERN CALIFORNIA AREA (continued) | | | | | | | | | Total |
|--------------------------------------|---|---------------------------|-------------------------------|--|--|-------------------------|---|--|------------|
| Reach No. | Littlerock Creek Irrigation District | Mojave Water Agency | Palmdale Water District | San | San Gabriel | San Gorgonio | The | Ventura | |
| | | | | Bernardino Municipal Water District | Valley Municipal Water District | Pass Water Agency | Metropolitan Water District of Southern California | County Flood Control District | |
| CA-AQ | | | | | | | | | |
| 1 | 0.00049180 | 0.01101147 | 0.00369131 | 0.02362857 | 0.00650354 | 0.00398392 | 0.43929350 | 0.00429212 | 1.00000000 |
| 2A | 0.00051413 | 0.01151136 | 0.00385891 | 0.02469101 | 0.00679699 | 0.00416304 | 0.45921072 | 0.00448701 | 1.00000000 |
| 2B | 0.00051469 | 0.01152409 | 0.00386317 | 0.02472511 | 0.00680570 | 0.00416880 | 0.45973548 | 0.00449194 | 1.00000000 |
| 3 | 0.00051461 | 0.01152193 | 0.00386244 | 0.02472246 | 0.00680478 | 0.00416835 | 0.45965407 | 0.00449108 | 1.00000000 |
| 4 | 0.00051451 | 0.01151965 | 0.00386167 | 0.02471968 | 0.00680380 | 0.00416787 | 0.45956848 | 0.00449019 | 1.00000000 |
| 5 | 0.00051440 | 0.01151681 | 0.00386070 | 0.02471620 | 0.00680259 | 0.00416730 | 0.45946161 | 0.00448907 | 1.00000000 |
| 6 | 0.00051419 | 0.01151251 | 0.00385926 | 0.02471095 | 0.00680076 | 0.00416640 | 0.45929991 | 0.00448738 | 1.00000000 |
| 7 | 0.00051413 | 0.01151113 | 0.00385879 | 0.02470927 | 0.00680016 | 0.00416612 | 0.45924807 | 0.00448685 | 1.00000000 |
| 8C | 0.00051405 | 0.01150938 | 0.00385821 | 0.02470716 | 0.00679941 | 0.00416576 | 0.45918261 | 0.00448616 | 1.00000000 |
| 8D | 0.00052466 | 0.01174718 | 0.00393793 | 0.02522383 | 0.00694100 | 0.00425288 | 0.46868533 | 0.00457883 | 1.00000000 |
| 9 | 0.00057339 | 0.01283841 | 0.00430367 | 0.02758959 | 0.00758975 | 0.00465175 | 0.51227887 | 0.00500407 | 1.00000000 |
| 10A | 0.00058254 | 0.01304366 | 0.00437246 | 0.02803943 | 0.00771262 | 0.00472760 | 0.52049091 | 0.00508405 | 1.00000000 |
| 11B | 0.00064171 | 0.01436906 | 0.00481665 | 0.03093503 | 0.00850448 | 0.00521581 | 0.57349473 | 0.00560046 | 1.00000000 |
| 12D | 0.00067463 | 0.01510596 | 0.00506361 | 0.03254889 | 0.00894541 | 0.00548790 | 0.60297374 | 0.00588755 | 1.00000000 |
| 12E | 0.00067553 | 0.01512626 | 0.00507040 | 0.03259749 | 0.00895830 | 0.00549608 | 0.60379667 | 0.00589546 | 1.00000000 |
| 13B | 0.00073290 | 0.01641098 | 0.00550099 | 0.03540212 | 0.00972547 | 0.00596896 | 0.65516902 | 0.00639604 | 1.00000000 |
| 14A | 0.00076961 | 0.01723325 | 0.00577656 | 0.03720681 | 0.01021819 | 0.00627322 | 0.68807273 | 0.00671639 | 1.00000000 |
| 14B | 0.00078354 | 0.01754538 | 0.00588113 | 0.03789703 | 0.01040613 | 0.00638960 | 0.70057530 | 0.00683798 | 1.00000000 |
| 14C | 0.00080743 | 0.01808019 | 0.00606036 | 0.03907670 | 0.01072763 | 0.00658850 | 0.72199174 | 0.00704634 | 1.00000000 |
| 15A | 0.00082089 | 0.01838154 | 0.00616135 | 0.03974336 | 0.01090913 | 0.00670088 | 0.73406357 | 0.00716371 | 1.00000000 |
| 16A | 0.00085171 | 0.01907194 | 0.00639271 | 0.04126559 | 0.01132404 | 0.00695754 | 0.76170731 | 0.00743264 | 1.00000000 |
| 17E | 0.00089182 | 0.01997003 | 0.00669365 | 0.04325018 | 0.01186455 | 0.00729213 | 0.79767940 | 0.00778251 | 1.00000000 |
| 17F | 0.00089372 | 0.02001251 | 0.00670788 | 0.04334270 | 0.01188988 | 0.00730773 | 0.79937767 | 0.00779906 | 1.00000000 |
| 18A | 0.00221525 | 0.04960424 | 0.01662680 | 0.10730448 | 0.02944860 | 0.01809192 | 0.57469530 | | 1.00000000 |
| 19 | 0.00221522 | 0.04960300 | 0.01662640 | 0.10730707 | 0.02944876 | 0.01809230 | 0.57469556 | | 1.00000000 |
| 19C | | | | | | | | | 1.00000000 |
| 20A | 0.00237800 | 0.05324853 | 0.01784830 | 0.11522152 | 0.03161798 | 0.01942666 | 0.61700971 | | 1.00000000 |
| 20B | 0.00249470 | 0.05586076 | 0.01872390 | 0.12087843 | 0.03316986 | 0.02038045 | 0.64729087 | | 1.00000000 |
| 21 | 0.00254199 | 0.05692053 | | 0.12319480 | 0.03380324 | 0.02077093 | 0.65963498 | | 1.00000000 |
| 22A | | 0.05773082 | | 0.12495766 | 0.03428605 | 0.02106816 | 0.66905054 | | 1.00000000 |
| 22B | | 0.05842136 | | 0.12645207 | 0.03469614 | 0.02132008 | 0.67705256 | | 1.00000000 |
| 23 | | | | 0.14467451 | 0.03969010 | 0.02439237 | 0.77446614 | | 1.00000000 |
| 24 | | | | 0.22243002 | 0.04339444 | 0.02843498 | 0.66607404 | | 1.00000000 |
| 25 | | | | 0.14947726 | 0.03997502 | 0.02520426 | 0.78534346 | | 1.00000000 |
| 26A | | | | 0.14947726 | 0.03997502 | 0.02520426 | 0.78534346 | | 1.00000000 |
| 28G | | | | 0.05126137 | | | 0.94873863 | | 1.00000000 |
| 28H | | | | | | | 1.00000000 | | 1.00000000 |
| 28J | | | | | | | 1.00000000 | | 1.00000000 |
| 29A | | | | | | | 0.95147783 | 0.01307880 | 1.00000000 |
| 29F | | | | | | | 0.95147785 | 0.01307876 | 1.00000000 |
| 29G | | | | | | | 0.95147785 | 0.01307876 | 1.00000000 |
| 29H | | | | | | | 0.96278381 | 0.00904475 | 1.00000000 |
| 29J | | | | | | | 0.95147787 | 0.01307875 | 1.00000000 |
| 30 | | | | | | | 0.96212388 | 0.00860328 | 1.00000000 |
| 31A | | | | | | | | | 1.00000000 |
| 33A | | | | | | | | | 1.00000000 |
| 34 | | | | | | | | | 1.00000000 |
| 35 | | | | | | | | | 1.00000000 |

TABLE B-2. Factors for Distributing Reach Minimum OMP&R Costs among Contractors

Sheet 1 of 2

| Reach No. | Reach Description | NORTH BAY AREA | | SOUTH BAY AREA | | | | Total |
|--------------------|--|--|--|-------------------------------|-------------------------------|-----------------------------------|-----------------------------|---|
| | | Napa County FC&WCD | Solano County WA | Alameda County FC&WCD, Zone 7 | Alameda County Water District | Santa Clara Valley Water District | Future Contractor South Bay | |
| 1 2 3A 3B | NORTH BAY AQUEDUCT Barker Slough thru Fairfield/Vacaville Turnout Fairfield/Vacaville Turnout to Cordelia Forebay Cordelia Forebay thru Benicia and Vallejo Turnouts Cordelia Forebay thru Napa Turnout Reservoir SOUTH BAY AQUEDUCT Bethany Reservoir thru Altamont Turnout Altamont Turnout thru Patterson Reservoir Patterson Reservoir to Del Valle Junction Del Valle Junction thru Lake del Valle Del Valle Junction thru South Livermore Turnout South Livermore Turnout thru Vallecitos Turnout Vallecitos Turnout thru Alameda-Bayside Turnout Alameda-Bayside Turnout thru Santa Clara Terminal Facilities CALIFORNIA AQUEDUCT Delta thru Bethany Reservoir | 0.29251728 0.42000793 1.00000000 | 0.70748272 0.57999207 1.00000000 | | | | | 1.00000000 1.00000000 1.00000000 1.00000000 1.00000000 1.00000000 1.00000000 1.00000000 1.00000000 1.00000000 1.00000000 1.00000000 N/A |

| Reach No. | Reach Description | CENTRAL COASTAL AREA | | SOUTHERN CALIFORNIA AREA | | | | |
|---|--|--|--|--|--|--|--|---------------------|
| | | San Luis Obispo County FC&WCD | Santa Barbara County FC&WCD | Antelope Valley-East Kern Water Agency | Castaic Lake Water Agency | Coachella Valley Water District | Crestline-Lake Arrowhead Water Agency | Desert Water Agency |
| 1 2A 2B 3 4 5 6 7 8C 8D 9 10A 11B 12D 12E 13B 14A 14B 14C 15A 16A 17E 17F 18A 19 19C 20A 20B 21 22A 22B 23 24 25 26A 28G 28H 28J 29A 29F 29G 29H 29J 30 31A 33A 33B 34 35 | CALIFORNIA AQUEDUCT Delta thru Bethany Reservoir Bethany Reservoir to Orestimba Creek Orestimba Creek to O'Neill Forebay O'Neill Forebay to Dos Amigos Pumping Plant Dos Amigos Pumping Plant to Panoche Creek Panoche Creek to Five Points Five Points to Arroyo Pasajero Arroyo Pasajero to Kettleman City Kettleman City thru Milham Avenue Milham Avenue thru Avenal Gap Avenal Gap thru Twisselman Road Twisselman Road thru Lost Hills Lost Hills to 7th Standard Road 7th Standard Road thru Elk Hills Road Elk Hills Road thru Tupman Road Tupman Road to Buena Vista Pumping Plant Buena Vista Pumping Plant thru Santiago Creek Santiago Creek thru Old River Road Old River Road to Wheeler Ridge Pumping Plant Wheeler Ridge Pumping Plant to Chrisman Pumping Plant Chrisman Pumping Plant to Edmonston Pumping Plant Edmonston Pumping Plant to Porter Tunnel Porter Tunnel to Junction, West Branch, Calif. Aqueduct Junction, West Branch, Calif. Aqueduct thru Alamo Pwp. Alamo Powerplant to Fairmont Buttes Junction thru Buttes Reservoir Fairmont thru 70th Street West 70th Street West to Palmdale Palmdale to Littlerock Creek Littlerock Creek to Pearlblossom Pumping Plant Pearlblossom Pumping Plant to West Fork Mojave River West Fork Mojave River to Silverwood Lake Cedar Springs Dam and Silverwood Lake Silverwood Lake to South Portal San Bernardino Tunnel South Portal, San Bernardino Tunnel thru Devil Canyon Pwp. Devil Canyon Powerplant to Barton Road Barton Road to Lake Perris Perris Dam and Lake Perris Junction, West Branch, Calif. Aqueduct thru Oso P. P. Oso Pumping Plant thru Quail Embankment Quail Embankment thru Warne Powerplant Pyramid Dam and Lake Pyramid Lake thru Castaic Powerplant Castaic Dam and Lake Avenal Gap to Devil's Den Pumping Plant Devil's Den Pumping Plant thru Tank 1 Tank 1 thru Chorro Valley Turnout Chorro Valley Turnout through Lopez Turnout Lopez Turnout thru Guadalupe Turnout | 0.00531733 0.00556981 0.00557592 0.00557485 0.00557373 0.00557233 0.00557023 0.00556955 0.00551372 0.00562589 0.03419277 0.03472327 0.03802285 0.03985259 0.03990292 0.04315064 0.04521241 0.04585272 0.04701675 0.04769844 0.04927486 0.05123570 0.05133785 0.13492411 0.13492060 1.00000000 0.06855702 0.02284441 0.02327543 0.01190663 0.00195128 0.13374659 0.12416451 0.02651510 0.09751351 0.12013473 0.30672992 0.32330286 0.32330202 0.00296720 0.00296796 0.05726734 0.05726649 0.05742327 0.03349572 0.05740996 0.03248607 0.10542164 0.10101221 0.10101221 0.05271277 | 0.00980983 0.01027565 0.01028692 0.01028496 0.01028290 0.01028034 0.01027645 0.01027521 0.01017222 0.01037913 0.03170479 0.03169382 0.03169031 0.03136877 0.03200831 0.03419277 0.03472327 0.03802285 0.03985259 0.03990292 0.04315064 0.04521241 0.04585272 0.04701675 0.04769844 0.04927486 0.05123570 0.05133785 0.13492411 0.13492060 1.00000000 0.06855702 0.02284441 0.02327543 0.01190663 0.00195128 0.13374659 0.12416451 0.02651510 0.09751351 0.12013473 0.30672992 0.32330286 0.32330202 0.00296720 0.00296796 0.05726734 0.05726649 0.05742327 0.03349572 0.05740996 0.03248607 0.19449108 0.89898779 0.89898779 0.94728723 1.00000000 | | 0.02543543 0.02659870 0.02665601 0.02665921 0.02666258 0.02666678 0.02667315 0.02667520 0.02634469 0.02690402 0.02770641 0.02816135 0.03096415 0.03253097 0.04111240 0.03533496 0.04659659 0.03317634 0.03195823 0.03242145 0.03349277 0.05283127 0.05293668 0.11343564 0.11343396 0.05080262 0.05283127 0.05293668 0.11343564 0.11343396 0.12212506 0.12811683 0.13055246 0.13241285 0.13374659 0.12416451 0.02651510 0.09751351 0.12013473 0.30672992 0.32330286 0.32330202 0.05726734 0.05726649 0.05742327 0.03349572 0.05740996 0.03248607 0.07351496 0.05400251 | 0.00133233 0.00139498 0.00139691 0.00139677 0.00139662 0.00139644 0.00139613 0.00139603 0.00138116 0.00140957 0.00152205 0.00154611 0.00169534 0.00177834 0.00178084 0.00192755 0.00202119 0.00205100 0.00210443 0.00213568 0.00220758 0.00229715 0.00230175 0.00605029 0.00605043 0.00651522 0.00683511 0.00696606 0.00706574 0.00713697 0.00818135 0.01251569 0.04143095 0.04366951 0.04366970 0.05726734 0.05726649 0.05742327 0.03349572 0.05740996 0.03248607 0.05400251 | 0.01285782 0.01346188 0.01348076 0.01347939 0.01347796 0.01347618 0.01347348 0.01347261 0.01332837 0.01360292 0.01436858 0.01459450 0.01599647 0.01677542 0.01679824 0.01817703 0.01905555 0.01933309 0.01983272 0.02012499 0.02079870 0.02163762 0.02168089 0.05154511 0.05154576 0.05550243 0.05822670 0.05933989 0.06018798 0.06079440 0.02168414 0.01910229 0.01317145 0.01622697 0.04143095 0.04366951 0.04366970 0.05726734 0.05726649 0.05742327 0.03349572 0.05740996 0.03248607 0.01800084 | |

Note: Proportionate use factors apply to 2010 and after, and reflect permanent capacity water transfer that have been signed as of February 1, 2009.

TABLE B-2. Factors for Distributing Reach Minimum OMP&R Costs among Contractors

Sheet 2 of 2

| Reach No. | SAN JOAQUIN VALLEY AREA | | | | | | | | | | |
|-----------|-------------------------|---------------------|-------------------------------------|-----------------------------------|---|---|--------------------------------|--------------|--------------------|-------------------------------|---|
| | Napa County FC&WCD | Solano County WA | Alameda County FC&WCD, Zone 7 | Dudley Ridge Water District | Empire West Side Irrigation District | Future Contractor San Joaquin Valley | Kern County Water Agency | | County of Kings | Oak Flat Water District | Tulare Lake Basin Water Storage District |
| | | | | | | | Municipal and Industrial | Agricultural | | | |
| CA-AQ | | | | | | | | | | | |
| 1 | 0.00101484 | 0.00145898 | 0.02319955 | 0.01821809 | 0.00088464 | 0.00254083 | 0.02734722 | 0.27098116 | 0.00247153 | 0.00166718 | 0.02623181 |
| 2A | 0.00106147 | 0.00152594 | 0.00868283 | 0.01903498 | 0.00092430 | 0.00286148 | 0.02862476 | 0.28312053 | 0.00258405 | 0.00174190 | 0.02740806 |
| 2B | 0.00106363 | 0.00152909 | 0.00869853 | 0.01908632 | 0.00092679 | 0.00286440 | 0.02866944 | 0.28389122 | 0.00258995 | | 0.02748195 |
| 3 | 0.00106373 | 0.00152923 | 0.00869869 | 0.01909164 | 0.00092704 | 0.00286388 | 0.02866790 | 0.28397255 | 0.00259035 | | 0.02748961 |
| 4 | 0.00106381 | 0.00152938 | 0.00869885 | 0.01909724 | 0.00092732 | 0.00286334 | 0.02866629 | 0.28405805 | 0.00259078 | | 0.02749767 |
| 5 | 0.00106393 | 0.00152955 | 0.00869906 | 0.01910423 | 0.00092766 | 0.00286267 | 0.02866425 | 0.28416480 | 0.00259131 | | 0.02750774 |
| 6 | 0.00106411 | 0.00152984 | 0.00869940 | 0.01911480 | 0.00092817 | 0.00286166 | 0.02866118 | 0.28432634 | 0.00259212 | | 0.02752295 |
| 7 | 0.00106417 | 0.00152994 | 0.00869951 | 0.01911820 | 0.00092834 | 0.00286133 | 0.02866019 | 0.28437812 | 0.00259238 | | 0.02752783 |
| 8C | 0.00105128 | 0.00151132 | 0.00859843 | 0.01885824 | 0.00091573 | 0.00263466 | 0.02834313 | 0.28049521 | 0.00255955 | | 0.02715356 |
| 8D | 0.00107350 | 0.00154329 | 0.00877848 | 0.01926721 | | 0.00268825 | 0.02893074 | 0.28658413 | 0.00165702 | | 0.00870335 |
| 9 | 0.00079392 | 0.00109556 | 0.00782173 | | | | 0.03125794 | 0.29107651 | | | |
| 10A | 0.00080693 | 0.00111332 | 0.00794777 | | | | 0.03175839 | 0.27992156 | | | |
| 11B | 0.00064656 | 0.00094676 | 0.00352637 | | | | 0.03485458 | 0.21642296 | | | |
| 12D | | | | | | | 0.03657930 | 0.18370552 | | | |
| 12E | | | | | | | 0.03663405 | 0.18259198 | | | |
| 13B | | | | | | | 0.01403926 | 0.14112056 | | | |
| 14A | | | | | | | 0.00595539 | 0.10858464 | | | |
| 14B | | | | | | | 0.00604538 | 0.09993238 | | | |
| 14C | | | | | | | 0.00620536 | 0.07881491 | | | |
| 15A | | | | | | | 0.00629881 | 0.06528273 | | | |
| 16A | | | | | | | 0.00651333 | 0.03407092 | | | |
| 17E | | | | | | | 0.00199437 | | | | |
| 31A | 0.00628695 | 0.00977801 | 0.02617705 | | | 0.05037550 | | 0.36716813 | 0.00176551 | | |

| SOUTHERN CALIFORNIA AREA (continued) | | | | | | | | | |
|--------------------------------------|---|---------------------------|-------------------------------|---|---|--|--|---|------------|
| Reach No. | Littlerock Creek Irrigation District | Mojave Water Agency | Palmdale Water District | San Bernardino Municipal Water District | San Gabriel Valley Municipal Water District | San Geronio Pass Water Agency | The Metropolitan Water District of Southern California | Ventura County Flood Control District | Total |
| CA-AQ | | | | | | | | | |
| 1 | 0.00049043 | 0.01817795 | 0.00458436 | 0.02356219 | 0.00648527 | 0.00397273 | 0.41536220 | 0.00427812 | 1.00000000 |
| 2A | 0.00051372 | 0.01902410 | 0.00480149 | 0.02467003 | 0.00679126 | 0.00415951 | 0.43505448 | 0.00448126 | 1.00000000 |
| 2B | 0.00051428 | 0.01905574 | 0.00480710 | 0.02470405 | 0.00679995 | 0.00416524 | 0.43555138 | 0.00448617 | 1.00000000 |
| 3 | 0.00051420 | 0.01905527 | 0.00480629 | 0.02470140 | 0.00679903 | 0.00416479 | 0.43547430 | 0.00448533 | 1.00000000 |
| 4 | 0.00051410 | 0.01905478 | 0.00480545 | 0.02469860 | 0.00679804 | 0.00416433 | 0.43539325 | 0.00448443 | 1.00000000 |
| 5 | 0.00051398 | 0.01905419 | 0.00480438 | 0.02469511 | 0.00679682 | 0.00416375 | 0.43529205 | 0.00448332 | 1.00000000 |
| 6 | 0.00051378 | 0.01905328 | 0.00480278 | 0.02468985 | 0.00679497 | 0.00416286 | 0.43513893 | 0.00448162 | 1.00000000 |
| 7 | 0.00051371 | 0.01905299 | 0.00480225 | 0.02468816 | 0.00679437 | 0.00416258 | 0.43508984 | 0.00448108 | 1.00000000 |
| 8C | 0.00050857 | 0.01883788 | 0.00475331 | 0.02442512 | 0.00672350 | 0.00411823 | 0.44215929 | 0.00443618 | 1.00000000 |
| 8D | 0.00051890 | 0.01923004 | 0.00485031 | 0.02492774 | 0.00686130 | 0.00420296 | 0.45122139 | 0.00452642 | 1.00000000 |
| 9 | 0.00055978 | 0.01835160 | 0.00523370 | 0.02691663 | 0.00740628 | 0.00453829 | 0.48706211 | 0.00488301 | 1.00000000 |
| 10A | 0.00056846 | 0.01863532 | 0.00531530 | 0.02734229 | 0.00752261 | 0.00461006 | 0.49471271 | 0.00495874 | 1.00000000 |
| 11B | 0.00062247 | 0.02040116 | 0.00582242 | 0.02998127 | 0.00824463 | 0.00505501 | 0.54219821 | 0.00542985 | 1.00000000 |
| 12D | 0.00065243 | 0.02137987 | 0.00602014 | 0.03144872 | 0.00864575 | 0.00530242 | 0.56857790 | 0.00569110 | 1.00000000 |
| 12E | 0.00065325 | 0.02140632 | 0.00602775 | 0.03149289 | 0.00865745 | 0.00530985 | 0.56934784 | 0.00569828 | 1.00000000 |
| 13B | 0.00070640 | 0.02314479 | 0.00651843 | 0.03408724 | 0.00936757 | 0.00574726 | 0.61605057 | 0.00616199 | 1.00000000 |
| 14A | 0.00074015 | 0.02424737 | 0.00682993 | 0.03574292 | 0.00981992 | 0.00602639 | 0.64580025 | 0.00645636 | 1.00000000 |
| 14B | 0.00075063 | 0.02458823 | 0.00692670 | 0.03626978 | 0.00996262 | 0.00611520 | 0.65518693 | 0.00654774 | 1.00000000 |
| 14C | 0.00076970 | 0.02520953 | 0.00710257 | 0.03721431 | 0.01021972 | 0.00627443 | 0.67209689 | 0.00671391 | 1.00000000 |
| 15A | 0.00078087 | 0.02557347 | 0.00720559 | 0.03776665 | 0.01037013 | 0.00636755 | 0.68199026 | 0.00681122 | 1.00000000 |
| 16A | 0.00080666 | 0.02641582 | 0.00744376 | 0.03903797 | 0.01071695 | 0.00658192 | 0.70479984 | 0.00703630 | 1.00000000 |
| 17E | 0.00083874 | 0.02746328 | 0.00774003 | 0.04062181 | 0.01114880 | 0.00684894 | 0.73320076 | 0.00731623 | 1.00000000 |
| 17F | 0.00084042 | 0.02751799 | 0.00775546 | 0.04070313 | 0.01117109 | 0.00686265 | 0.73466655 | 0.00733081 | 1.00000000 |
| 18A | 0.00220874 | 0.04945876 | 0.01657848 | 0.10699014 | 0.02936220 | 0.01803879 | 0.47140774 | | 1.00000000 |
| 19 | 0.00220870 | 0.04945751 | 0.01657804 | 0.10699277 | 0.02936239 | 0.01803923 | 0.47141061 | | 1.00000000 |
| 19C | | | | | | | | | 1.00000000 |
| 20A | 0.00237787 | 0.05324421 | 0.01784728 | 0.11521174 | 0.03161525 | 0.01942494 | 0.50757898 | | 1.00000000 |
| 20B | 0.00249455 | 0.05585607 | 0.01872278 | 0.12086783 | 0.03316690 | 0.02037859 | 0.53249023 | | 1.00000000 |
| 21 | 0.00254183 | 0.05691567 | | 0.12318361 | 0.03380017 | 0.02076901 | 0.54265567 | | 1.00000000 |
| 22A | | 0.05772584 | | 0.12494639 | 0.03428290 | 0.02106619 | 0.55040548 | | 1.00000000 |
| 22B | | 0.05830722 | | 0.12620561 | 0.03462835 | 0.02127845 | 0.55595113 | | 1.00000000 |
| 23 | | | | 0.14467451 | 0.03969010 | 0.02439237 | 0.63721302 | | 1.00000000 |
| 24 | | | | 0.22243002 | 0.04339445 | 0.02843498 | 0.64760747 | | 1.00000000 |
| 25 | | | | 0.11825184 | 0.03722720 | 0.01993915 | 0.71389685 | | 1.00000000 |
| 26A | | | | 0.14947726 | 0.03997501 | 0.02520426 | 0.64898177 | | 1.00000000 |
| 28G | | | | 0.05126136 | | | 0.60057777 | | 1.00000000 |
| 28H | | | | | | | 0.63302763 | | 1.00000000 |
| 28J | | | | | | | 0.63302828 | | 1.00000000 |
| 29A | | | | | | | 0.92702291 | 0.01274255 | 1.00000000 |
| 29F | | | | | | | 0.92702302 | 0.01274253 | 1.00000000 |
| 29G | | | | | | | 0.92979606 | 0.01278067 | 1.00000000 |
| 29H | | | | | | | 0.95753173 | 0.00897255 | 1.00000000 |
| 29J | | | | | | | 0.92980918 | 0.01278086 | 1.00000000 |
| 30 | | | | | | | 0.95895422 | 0.00855971 | 1.00000000 |
| 31A | | 0.09301782 | | | | | | | 1.00000000 |
| 33A | | | | | | | | | 1.00000000 |
| 33B | | | | | | | | | 1.00000000 |
| 34 | | | | | | | | | 1.00000000 |
| 35 | | | | | | | | | 1.00000000 |

TABLE B-3. Power Costs and Credits, Transmission Costs and Annual Replacement Deposits for Each Aqueduct Pumping and Power Recovery Plant ^a

(in dollars)

Sheet 1 of 3

| Calendar Year | NORTH BAY AQUEDUCT | | | SOUTH BAY AQUEDUCT | CALIFORNIA AQUEDUCT | | | |
|------------------|--------------------------------|----------------------------------|------------------------------------|--|---------------------|--------------------------|------------------------------|-----------------------|
| | Reach 1 | Reach 3A | Reach 3B | Reach 1 (c) | Reach 1 | Reach 4 | Reach 14A | Reach 15A |
| | Barker Slough Pumping P. | Cordelia Pumping P. Solano | Cordelia Pumping P. Napa (b) | South Bay & Del Valle Pumping P. | Banks Pumping P. | Dos Amigos Pumping P. | Buena Vista Pumping P. | Teerink Pumping P. |
| | [1] | [2] | [3] | [4] | [5] | [6] | [7] | [8] |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1962 | 0 | 0 | 0 | 36,771 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 55,654 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 73,240 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 137,665 | 0 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 186,064 | 0 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 216,515 | 15,453 | 0 | 0 | 0 |
| 1968 | 0 | 0 | 6,989 | 336,671 | 452,630 | 202,947 | 0 | 0 |
| 1969 | 0 | 0 | 8,551 | 257,579 | 293,741 | 135,425 | 0 | 0 |
| 1970 | 0 | 0 | 13,598 | 396,358 | 346,215 | 211,197 | 1 | 0 |
| 1971 | 0 | 0 | 10,609 | 381,662 | 574,015 | 225,188 | 115,801 | 2,564 |
| 1972 | 0 | 0 | 14,434 | 598,702 | 933,292 | 492,633 | 198,914 | 68,304 |
| 1973 | 0 | 0 | 14,449 | 493,490 | 688,030 | 381,232 | 263,468 | 236,623 |
| 1974 | 0 | 0 | 17,473 | 565,575 | 783,562 | 447,772 | 315,939 | 324,966 |
| 1975 | 0 | 0 | 14,779 | 349,758 | 1,341,019 | 518,322 | 508,060 | 552,952 |
| 1976 | 0 | 0 | 20,856 | 571,361 | 1,638,453 | 641,115 | 712,947 | 713,875 |
| 1977 | 0 | 0 | 22,635 | 512,996 | 1,013,307 | 277,439 | 265,169 | 300,985 |
| 1978 | 0 | 0 | 21,692 | 586,355 | 2,339,502 | 560,759 | 689,236 | 616,104 |
| 1979 | 0 | 0 | 16,237 | 605,136 | 3,554,256 | 1,008,564 | 776,016 | 749,188 |
| 1980 | 0 | 0 | 19,945 | 523,369 | 2,083,336 | 1,129,152 | 1,051,629 | 1,047,495 |
| 1981 | 0 | 0 | 23,842 | 567,692 | 3,952,931 | 1,939,189 | 1,336,867 | 1,319,739 |
| 1982 | 0 | 0 | 12,157 | 605,780 | 3,082,031 | 1,363,705 | 1,200,226 | 1,213,660 |
| 1983 | 0 | 0 | 2,342 | 82,222 | 1,001,612 | 396,086 | 450,801 | 432,165 |
| 1984 | 0 | 0 | 4,822 | 271,543 | 1,856,959 | 976,773 | 823,681 | 770,618 |
| 1985 | 0 | 0 | 10,188 | 451,020 | 3,186,029 | 1,621,418 | 1,409,980 | 1,411,621 |
| 1986 | 0 | 0 | 15,501 | 807,984 | 6,601,752 | 2,627,407 | 2,405,224 | 2,432,322 |
| 1987 | 0 | 0 | 27,223 | 886,956 | 5,820,699 | 2,555,341 | 2,295,575 | 2,286,066 |
| 1988 | 17,813 | 0 | 24,020 | 909,300 | 6,365,669 | 2,648,986 | 2,628,985 | 2,636,224 |
| 1989 | 29,819 | 43,846 | 26,519 | 1,161,160 | 9,964,956 | 4,002,409 | 4,130,033 | 4,159,440 |
| 1990 | 52,210 | 67,109 | 40,775 | 1,834,626 | 10,554,762 | 4,541,508 | 5,855,196 | 6,099,412 |
| 1991 | 10,429 | 10,118 | 5,252 | 378,966 | 1,994,449 | 510,781 | 944,445 | 1,077,662 |
| 1992 | 13,319 | 13,070 | 9,406 | 311,251 | 3,385,375 | 1,235,571 | 1,366,433 | 1,441,966 |
| 1993 | (11,941) | (8,753) | (5,392) | (158,214) | 537,591 | 348,409 | (127,617) | (104,923) |
| 1994 | 46,791 | 39,624 | 29,189 | 799,624 | 6,013,464 | 2,450,174 | 2,778,971 | 2,823,137 |
| 1995 | 20,014 | 20,620 | 11,791 | 247,645 | 4,066,595 | 1,532,502 | 952,304 | 877,047 |
| 1996 | 57,320 | 47,288 | 23,483 | 619,160 | 8,385,766 | 4,056,188 | 2,565,655 | 2,378,677 |
| 1997 | 67,416 | 52,935 | 21,955 | 986,312 | 7,010,228 | 2,870,194 | 2,637,433 | 2,469,147 |
| 1998 | (11,427) | (10,141) | (4,879) | (133,271) | 204,374 | (365,361) | (319,014) | (295,861) |
| 1999 | 34,881 | 25,288 | 11,623 | 507,549 | 6,333,906 | 2,421,869 | 1,691,167 | 1,446,775 |
| 2000 | 59,489 | 41,378 | 15,197 | 723,182 | 7,999,825 | 3,091,487 | 2,959,891 | 3,124,342 |
| 2001 | 374,919 | 250,132 | 214,039 | 4,248,059 | 27,592,213 | 10,690,521 | 15,011,328 | 15,907,217 |
| 2002 | 192,540 | 104,564 | 61,470 | 2,036,126 | 17,666,689 | 7,284,182 | 8,870,415 | 9,554,380 |
| 2003 | 198,388 | 118,373 | 97,750 | 2,591,042 | 24,684,247 | 9,171,613 | 10,693,487 | 11,528,291 |
| 2004 | 261,564 | 138,880 | 106,974 | 2,414,624 | 22,854,880 | 9,426,446 | 12,567,612 | 13,722,260 |
| 2005 | 290,115 | 147,306 | 148,650 | 2,781,681 | 33,653,683 | 12,703,357 | 11,801,046 | 12,570,497 |
| 2006 | 232,913 | 111,602 | 144,398 | 2,486,855 | 23,415,883 | 10,122,958 | 11,132,925 | 11,910,011 |
| 2007 | 453,117 | 223,159 | 253,881 | 4,743,488 | 23,257,307 | 11,481,036 | 17,223,816 | 18,683,651 |
| 2008 | 410,769 | 185,066 | 296,141 | 3,292,436 | 14,134,046 | 6,332,068 | 11,139,582 | 12,841,423 |
| 2009 | 242,740 | 105,994 | 187,302 | 2,745,742 | 14,063,780 | 4,818,399 | 7,832,703 | 8,687,155 |
| 2010 | 709,088 | 348,467 | 930,629 | 3,331,780 | 24,118,907 | 8,092,802 | 9,710,606 | 10,918,258 |
| 2011 | 917,623 | 538,817 | 1,162,873 | 6,074,014 | 33,362,379 | 17,710,709 | 22,549,549 | 26,270,818 |
| 2012 | 758,266 | 441,900 | 968,086 | 5,286,161 | 38,622,049 | 14,459,011 | 18,852,778 | 21,991,731 |
| 2013 | 363,824 | 214,484 | 414,736 | 3,497,932 | 32,576,531 | 16,805,167 | 19,911,898 | 19,337,526 |
| 2014 | 374,028 | 234,712 | 414,736 | 3,521,661 | 36,812,566 | 17,743,111 | 21,539,368 | 21,014,759 |
| 2015 | 599,235 | 265,905 | 659,202 | 5,590,602 | 39,967,658 | 19,694,056 | 24,662,231 | 24,233,195 |
| 2016 | 599,235 | 265,905 | 659,202 | 5,590,602 | 39,840,144 | 19,861,956 | 24,954,231 | 24,534,070 |
| 2017 | 599,235 | 265,905 | 659,202 | 5,590,602 | 38,236,279 | 19,446,465 | 24,228,955 | 23,786,625 |
| 2018 | 599,235 | 265,905 | 659,202 | 5,590,602 | 42,924,598 | 19,979,122 | 25,157,306 | 24,743,360 |
| 2019 | 599,235 | 265,905 | 659,202 | 5,590,602 | 40,514,112 | 19,991,446 | 25,178,612 | 24,765,349 |
| 2020 | 599,235 | 265,905 | 659,202 | 5,590,602 | 39,152,953 | 19,957,565 | 25,155,797 | 24,741,815 |
| 2021 | 599,271 | 265,905 | 659,309 | 5,590,602 | 40,573,253 | 19,989,686 | 25,211,775 | 24,799,518 |
| 2022 | 599,271 | 265,905 | 659,309 | 5,590,602 | 39,976,461 | 19,977,470 | 25,189,822 | 24,776,918 |
| 2023 | 599,271 | 265,905 | 659,309 | 5,590,602 | 40,946,275 | 20,019,148 | 25,261,753 | 24,851,041 |
| 2024 | 599,271 | 265,905 | 659,309 | 5,590,602 | 38,862,713 | 20,008,656 | 25,243,393 | 24,832,071 |
| 2025 | 599,271 | 265,905 | 659,309 | 5,590,602 | 40,692,683 | 19,994,249 | 25,217,668 | 24,805,590 |
| 2026 | 599,271 | 265,905 | 659,309 | 5,590,602 | 44,580,920 | 20,024,322 | 25,270,125 | 24,859,665 |
| 2027 | 599,271 | 265,905 | 659,309 | 5,590,602 | 39,161,756 | 19,965,038 | 25,168,983 | 24,755,397 |
| 2028 | 599,271 | 265,905 | 659,309 | 5,590,602 | 41,973,073 | 19,981,458 | 25,198,050 | 24,785,362 |
| 2029 | 599,271 | 265,905 | 659,309 | 5,590,602 | 38,821,789 | 19,936,402 | 25,118,394 | 24,703,299 |
| 2030 | 599,271 | 265,905 | 659,309 | 5,590,602 | 40,224,268 | 19,945,923 | 25,135,065 | 24,720,437 |
| 2031 | 599,271 | 265,905 | 659,309 | 5,590,602 | 41,549,749 | 19,938,055 | 25,120,155 | 24,705,095 |
| 2032 | 599,271 | 265,905 | 659,309 | 5,590,602 | 40,034,451 | 19,988,967 | 25,209,835 | 24,797,506 |
| 2033 | 599,271 | 265,905 | 659,309 | 5,590,602 | 42,185,129 | 19,954,259 | 25,150,587 | 24,736,462 |
| 2034 | 599,271 | 265,905 | 659,309 | 5,590,602 | 40,671,161 | 19,984,117 | 25,201,823 | 24,789,278 |
| 2035 | 599,271 | 265,905 | 659,309 | 5,590,602 | 33,121,296 | 19,551,164 | 24,447,982 | 24,012,371 |
| TOTAL | 18,750,502 | 9,089,839 | 19,753,773 | 185,199,206 | 1,325,201,665 | 622,087,285 | 768,203,071 | 775,284,693 |

(a) Starting with 2005 transmission costs that vary and depend on Power usage are included, therefore recovered through the variable component.

(b) Power costs for the period 1968 through 1987 are for an interim facility.

(c) The costs of Del Valle Pumping Plant are combined with those of South Bay Pumping Plant to simplify the cost allocations.

TABLE B-3. Power Costs and Credits, Transmission Costs and Annual Replacement Deposits for Each Aqueduct Pumping and Power Recovery Plant

(in dollars)

Sheet 2 of 3

| Calendar Year | CALIFORNIA AQUEDUCT (continued) | | | | | | | |
|------------------|---------------------------------|----------------------|------------------|---------------------------|--------------------------|-------------------------|-------------------------|--------------------------|
| | Reach 16A | Reach 17E | Reach 18A | Reach 22B | Reach 23 | Reach 26A | Reach 2B (EBX) | Reach 3A (EBX) |
| | Chrisman Pumping P. | Edmonston Pumping P. | Alamo Powerplant | Pearblossom Pumping Plant | Mojave Siphon Powerplant | Devil Canyon Powerplant | Greenspot Pumping Plant | Crafton Hills Pumping P. |
| | [9] | [10] | [11] | [12] | [13] | [14] | [15] | [16] |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1968 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1969 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1970 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1972 | 142,902 | 542,625 | 0 | 3,468 | 0 | (3,024) | 0 | 0 |
| 1973 | 387,198 | 1,548,428 | 0 | 202,289 | 0 | (461,268) | 0 | 0 |
| 1974 | 564,464 | 2,164,223 | 0 | 324,993 | 0 | (546,156) | 0 | 0 |
| 1975 | 1,095,331 | 4,010,395 | 0 | 575,061 | 0 | (1,095,523) | 0 | 0 |
| 1976 | 1,506,985 | 5,443,936 | 0 | 889,544 | 0 | (1,566,056) | 0 | 0 |
| 1977 | 652,643 | 2,345,033 | 0 | 315,128 | 0 | (1,222,866) | 0 | 0 |
| 1978 | 1,132,296 | 4,180,131 | 0 | 1,508,115 | 0 | (3,085,094) | 0 | 0 |
| 1979 | 1,526,850 | 5,475,688 | 0 | 1,838,687 | 0 | (3,466,481) | 0 | 0 |
| 1980 | 2,102,439 | 7,028,235 | 0 | 1,762,063 | 0 | (3,318,152) | 0 | 0 |
| 1981 | 2,838,773 | 9,351,931 | 0 | 2,296,771 | 0 | (3,842,971) | 0 | 0 |
| 1982 | 2,424,920 | 8,352,207 | 0 | 1,498,620 | 0 | (2,736,072) | 0 | 0 |
| 1983 | 793,915 | 2,375,225 | 0 | 397,766 | 0 | (5,478,830) | 0 | 0 |
| 1984 | 1,479,784 | 4,585,198 | 0 | 624,213 | 0 | (7,350,989) | 0 | 0 |
| 1985 | 2,812,461 | 9,365,591 | 0 | 1,226,515 | 0 | (10,748,103) | 0 | 0 |
| 1986 | 4,999,949 | 16,956,023 | (1,013,756) | 2,359,599 | 0 | (11,484,996) | 0 | 0 |
| 1987 | 4,586,919 | 15,121,886 | (1,064,827) | 1,907,854 | 0 | (11,151,140) | 0 | 0 |
| 1988 | 5,284,130 | 17,342,811 | (744,374) | 2,375,784 | 0 | (14,495,967) | 0 | 0 |
| 1989 | 8,772,733 | 29,455,330 | (789,392) | 4,235,981 | 0 | (18,688,631) | 0 | 0 |
| 1990 | 13,814,150 | 49,027,449 | (841,172) | 6,559,548 | 0 | (21,045,321) | 0 | 0 |
| 1991 | 2,535,180 | 9,033,684 | (269,625) | 996,352 | 0 | (4,884,013) | 0 | 0 |
| 1992 | 2,907,026 | 9,754,469 | (975,679) | 1,225,121 | 0 | (9,782,946) | 0 | 0 |
| 1993 | (598,008) | (2,721,158) | (58,116) | (260,035) | 0 | (7,502,549) | 0 | 0 |
| 1994 | 5,941,789 | 20,657,617 | (60,125) | 2,644,592 | 0 | (11,998,949) | 0 | 0 |
| 1995 | 1,752,212 | 5,829,425 | (1,324,810) | 1,106,460 | 0 | (9,742,248) | 0 | 0 |
| 1996 | 5,050,986 | 17,658,964 | (2,955,178) | 2,833,791 | (979,429) | (12,358,465) | 0 | 0 |
| 1997 | 5,545,919 | 19,859,875 | (2,572,220) | 3,156,995 | (1,748,195) | (13,830,356) | 0 | 0 |
| 1998 | (664,843) | (2,312,472) | (2,016,390) | (443,482) | (1,253,110) | (10,108,555) | 0 | 0 |
| 1999 | 3,616,732 | 13,967,075 | (2,980,122) | 1,837,476 | (2,587,958) | (15,232,207) | 0 | 0 |
| 2000 | 7,046,606 | 25,339,736 | (5,123,988) | 3,707,856 | (4,402,610) | (25,758,437) | 0 | 0 |
| 2001 | 35,394,917 | 129,212,359 | (3,383,762) | 18,868,242 | (3,714,425) | (20,062,834) | 0 | 0 |
| 2002 | 21,173,346 | 77,461,814 | (5,057,760) | 10,849,297 | (5,371,837) | (25,292,454) | 0 | 0 |
| 2003 | 25,592,971 | 93,999,681 | (3,408,979) | 14,571,379 | (6,565,620) | (27,777,638) | 0 | 0 |
| 2004 | 30,458,046 | 111,866,623 | (6,431,864) | 16,978,585 | (7,858,117) | (32,044,505) | 78,351 | 68,735 |
| 2005 | 27,745,055 | 98,011,689 | (5,880,165) | 17,428,165 | (6,454,740) | (28,818,797) | 69,752 | 49,118 |
| 2006 | 26,041,262 | 87,952,786 | (4,091,143) | 16,290,183 | (6,391,206) | (34,897,387) | 140,127 | 153,528 |
| 2007 | 40,775,722 | 140,309,327 | (3,029,048) | 19,444,259 | (5,896,486) | (28,814,592) | 269,892 | 265,502 |
| 2008 | 25,056,884 | 86,841,134 | (3,426,928) | 11,414,118 | (3,300,797) | (16,968,293) | 274,587 | 351,042 |
| 2009 | 18,182,134 | 65,421,819 | (3,266,008) | 7,986,991 | (2,288,833) | (13,842,660) | 327,221 | 344,024 |
| 2010 | 23,047,972 | 78,195,757 | (3,075,200) | 9,792,519 | (3,123,300) | (9,402,500) | 519,051 | 647,771 |
| 2011 | 55,747,717 | 192,093,770 | (7,508,200) | 34,367,795 | (11,580,500) | (33,057,500) | 292,422 | 364,940 |
| 2012 | 46,695,241 | 160,831,866 | (6,906,800) | 28,737,772 | (10,070,000) | (28,797,500) | 295,427 | 368,690 |
| 2013 | 45,162,226 | 168,627,555 | (7,003,334) | 29,073,101 | (8,668,370) | (30,765,500) | 541,404 | 675,667 |
| 2014 | 49,185,163 | 183,867,267 | (7,387,052) | 30,923,083 | (9,307,245) | (32,725,000) | 541,404 | 675,667 |
| 2015 | 56,904,687 | 213,110,315 | (7,894,584) | 33,407,763 | (10,349,775) | (34,645,925) | 541,404 | 675,667 |
| 2016 | 57,626,407 | 215,844,311 | (7,944,494) | 33,727,142 | (10,802,260) | (34,938,250) | 541,404 | 675,667 |
| 2017 | 55,833,624 | 209,052,849 | (7,985,724) | 33,731,957 | (10,982,380) | (34,857,275) | 541,404 | 675,667 |
| 2018 | 58,128,416 | 217,745,996 | (7,948,710) | 33,738,999 | (10,684,175) | (34,997,425) | 541,404 | 675,667 |
| 2019 | 58,181,125 | 217,945,729 | (7,947,408) | 33,767,419 | (10,696,335) | (35,071,025) | 541,404 | 675,667 |
| 2020 | 58,124,643 | 217,731,804 | (7,932,466) | 33,815,206 | (10,762,265) | (34,970,600) | 541,404 | 675,667 |
| 2021 | 58,263,044 | 218,256,018 | (7,996,264) | 33,839,925 | (10,926,710) | (34,897,250) | 541,404 | 675,667 |
| 2022 | 58,208,827 | 218,050,716 | (7,980,020) | 33,845,602 | (10,741,745) | (34,997,075) | 541,404 | 675,667 |
| 2023 | 58,386,643 | 218,724,253 | (8,016,166) | 33,856,776 | (10,970,980) | (34,945,325) | 541,404 | 675,667 |
| 2024 | 58,341,191 | 218,552,042 | (8,026,706) | 33,882,107 | (10,681,040) | (35,041,225) | 541,404 | 675,667 |
| 2025 | 58,277,632 | 218,311,349 | (8,035,510) | 33,805,613 | (10,565,805) | (34,967,575) | 541,404 | 675,667 |
| 2026 | 58,407,302 | 218,802,508 | (8,018,832) | 33,846,788 | (10,460,545) | (35,038,525) | 541,404 | 675,667 |
| 2027 | 58,157,268 | 217,855,366 | (8,019,514) | 33,850,201 | (10,762,550) | (34,997,800) | 541,404 | 675,667 |
| 2028 | 58,229,127 | 218,127,605 | (8,021,126) | 33,852,357 | (10,459,957) | (35,072,525) | 541,404 | 675,667 |
| 2029 | 58,032,268 | 217,381,813 | (8,016,910) | 33,890,047 | (10,719,135) | (34,956,325) | 541,404 | 675,667 |
| 2030 | 58,073,408 | 217,537,640 | (7,978,098) | 33,835,398 | (10,735,380) | (34,966,175) | 541,404 | 675,667 |
| 2031 | 58,036,580 | 217,398,089 | (7,998,992) | 33,824,655 | (10,457,410) | (35,051,125) | 541,404 | 675,667 |
| 2032 | 58,258,266 | 218,237,945 | (7,976,548) | 33,844,740 | (10,345,880) | (35,011,900) | 541,404 | 675,667 |
| 2033 | 58,111,852 | 217,683,335 | (8,023,110) | 33,891,341 | (10,457,125) | (35,066,300) | 541,404 | 675,667 |
| 2034 | 58,238,469 | 218,162,996 | (8,015,236) | 33,816,715 | (10,575,970) | (34,972,700) | 541,404 | 675,667 |
| 2035 | 56,375,048 | 211,103,930 | (8,016,662) | 33,855,124 | (10,266,460) | (35,093,425) | 541,404 | 675,667 |
| TOTAL | 1,776,506,924 | 6,542,049,616 | (260,439,097) | 1,024,358,489 | (324,966,678) | (1,340,809,275) | 14,719,122 | 18,153,697 |

TABLE B-3. Power Costs and Credits, Transmission Costs and Annual Replacement Deposits for Each Aqueduct Pumping and Power Recovery Plant

(in dollars)

Sheet 3 of 3

| Calendar Year | CALIFORNIA AQUEDUCT (continued) | | | | | | GRAND TOTAL |
|------------------|---|--|--------------------------------------|--|---|--|----------------|
| | Reach 4B (EBX) Cherry Valley Pumping P. | Reach 29A Oso Pumping Plant | Reach 29G Warne Powerplant | Reach 29J Castaic Powerplant | Reach 31A Las Perillas and Badger Hill Pumping Plants | Reach 33A Devil's Den, Bluestone and Polonio Pass Pumping Plants | |
| | [17] | [18] | [19] | [20] | [21] | [22] | |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 36,771 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 55,654 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 73,240 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 137,665 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 186,064 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 231,968 |
| 1968 | 0 | 0 | 0 | 0 | 118,676 | 0 | 1,117,913 |
| 1969 | 0 | 0 | 0 | 0 | 78,350 | 0 | 773,646 |
| 1970 | 0 | 0 | 0 | 0 | 136,429 | 0 | 1,103,798 |
| 1971 | 0 | 0 | 0 | 0 | 166,296 | 0 | 1,476,135 |
| 1972 | 0 | 79,315 | 0 | (211,144) | 212,938 | 0 | 3,073,359 |
| 1973 | 0 | 122,787 | 0 | (1,057,564) | 114,897 | 0 | 2,934,059 |
| 1974 | 0 | 157,511 | 0 | (1,547,884) | 111,442 | 0 | 3,683,880 |
| 1975 | 0 | 314,636 | 0 | (2,455,461) | 88,451 | 0 | 5,817,780 |
| 1976 | 0 | 326,967 | 0 | (2,827,557) | 139,279 | 0 | 8,211,705 |
| 1977 | 0 | 75,335 | 0 | (3,734,462) | 63,079 | 0 | 886,421 |
| 1978 | 0 | 89,383 | 0 | (1,542,479) | 176,153 | 0 | 7,272,153 |
| 1979 | 0 | 102,584 | 0 | (2,776,030) | 188,881 | 0 | 9,599,576 |
| 1980 | 0 | 236,768 | 0 | (3,415,486) | 168,458 | 0 | 10,419,251 |
| 1981 | 0 | 444,280 | 0 | (2,834,322) | 169,177 | 0 | 17,563,899 |
| 1982 | 0 | 539,245 | (783,626) | (3,463,971) | 168,390 | 0 | 13,477,272 |
| 1983 | 0 | 214,069 | (1,488,439) | (6,649,718) | 17,920 | 0 | (7,452,864) |
| 1984 | 0 | 484,239 | (4,088,209) | (4,710,802) | 112,679 | 0 | (4,159,491) |
| 1985 | 0 | 874,069 | (5,930,176) | (15,698,638) | 146,843 | 0 | (9,861,182) |
| 1986 | 0 | 1,269,590 | (5,579,301) | (11,072,448) | 297,886 | 0 | 11,622,736 |
| 1987 | 0 | 1,355,533 | (6,445,265) | (11,726,458) | 245,082 | 0 | 6,701,444 |
| 1988 | 0 | 1,515,349 | (7,457,050) | (13,026,992) | 214,519 | 0 | 6,239,207 |
| 1989 | 0 | 2,156,915 | (8,822,367) | (15,535,849) | 282,180 | 0 | 24,585,082 |
| 1990 | 0 | 2,913,030 | (11,225,401) | (20,510,539) | 416,832 | 0 | 48,154,174 |
| 1991 | 0 | 576,721 | (3,882,595) | (6,579,194) | 3,610 | 0 | 2,462,222 |
| 1992 | 0 | 829,862 | (6,369,339) | (10,976,538) | 101,665 | 0 | (5,509,968) |
| 1993 | 0 | 70,836 | (4,665,393) | (9,531,404) | (111,306) | 0 | (24,907,973) |
| 1994 | 0 | 1,503,796 | (7,249,239) | (13,126,331) | 206,086 | (1,127) | 13,499,083 |
| 1995 | 0 | 247,869 | (1,934,202) | (4,049,615) | 243,434 | 0 | (142,957) |
| 1996 | 0 | 895,929 | (4,248,531) | (8,457,232) | 296,170 | 0 | 15,870,542 |
| 1997 | 0 | 902,690 | (4,824,488) | (8,776,260) | 298,483 | 208,816 | 14,336,879 |
| 1998 | 0 | (67,399) | (1,811,154) | (4,644,120) | (55,491) | (92,902) | (24,405,948) |
| 1999 | 0 | 731,865 | (5,831,573) | (9,811,777) | 166,036 | 234,077 | (3,417,318) |
| 2000 | 0 | 1,279,835 | (10,161,472) | (17,729,381) | 223,715 | 370,076 | (7,193,273) |
| 2001 | 0 | 6,480,791 | (7,918,467) | (13,370,061) | 1,072,998 | 2,162,821 | 219,031,007 |
| 2002 | 0 | 4,246,409 | (11,349,183) | (19,513,997) | 547,531 | 1,344,783 | 94,808,315 |
| 2003 | 0 | 4,641,548 | (10,436,535) | (17,134,431) | 637,860 | 1,538,771 | 134,742,198 |
| 2004 | 7,271 | 5,667,657 | (12,281,228) | (21,354,179) | 673,974 | 1,799,785 | 149,122,374 |
| 2005 | 2,575 | 3,705,635 | (7,106,531) | (13,339,416) | 855,239 | 1,743,858 | 162,107,772 |
| 2006 | 18,855 | 2,847,726 | (7,208,025) | (11,455,260) | 838,904 | 1,495,401 | 131,293,296 |
| 2007 | 14,522 | 7,659,266 | (11,444,524) | (21,845,299) | 1,319,345 | 2,310,659 | 177,658,000 |
| 2008 | 10,978 | 5,040,941 | (7,762,363) | (14,943,326) | 1,114,074 | 1,598,940 | 233,932,522 |
| 2009 | 9,084 | 4,011,252 | (6,997,502) | (16,308,270) | 784,153 | 1,081,097 | 94,128,327 |
| 2010 | 15,463 | 4,982,908 | (5,907,500) | (11,982,500) | 673,889 | 2,235,144 | 144,780,011 |
| 2011 | 0 | 8,499,570 | (10,602,500) | (19,155,000) | 1,544,605 | 5,195,106 | 324,789,007 |
| 2012 | 0 | 7,071,947 | (9,325,000) | (16,632,500) | 1,092,525 | 2,949,840 | 277,691,490 |
| 2013 | 0 | 7,805,828 | (12,484,425) | (19,315,875) | 1,544,185 | 3,899,590 | 272,214,150 |
| 2014 | 0 | 8,865,034 | (14,156,325) | (22,050,000) | 1,544,185 | 3,899,590 | 295,530,713 |
| 2015 | 0 | 10,701,579 | (16,999,575) | (26,620,700) | 1,774,063 | 5,449,920 | 341,726,923 |
| 2016 | 0 | 10,900,055 | (17,260,225) | (27,104,700) | 1,774,063 | 5,449,920 | 344,794,385 |
| 2017 | 0 | 10,109,494 | (16,055,000) | (25,127,125) | 1,774,063 | 5,449,920 | 334,974,742 |
| 2018 | 0 | 11,116,495 | (17,560,850) | (27,635,725) | 1,774,063 | 5,449,920 | 350,263,405 |
| 2019 | 0 | 11,129,071 | (17,570,775) | (27,665,700) | 1,774,063 | 5,449,920 | 348,077,618 |
| 2020 | 0 | 11,086,422 | (17,494,075) | (27,558,250) | 1,774,063 | 5,449,920 | 346,604,547 |
| 2021 | 0 | 11,138,089 | (17,575,550) | (27,686,625) | 1,774,063 | 5,449,920 | 348,545,050 |
| 2022 | 0 | 11,112,112 | (17,538,400) | (27,622,650) | 1,774,063 | 5,449,920 | 347,814,179 |
| 2023 | 0 | 11,186,163 | (17,627,750) | (27,802,575) | 1,774,063 | 5,449,920 | 349,425,397 |
| 2024 | 0 | 11,156,736 | (17,609,550) | (27,733,475) | 1,774,063 | 5,449,920 | 347,343,054 |
| 2025 | 0 | 11,157,311 | (17,594,625) | (27,732,800) | 1,774,063 | 5,449,920 | 348,921,921 |
| 2026 | 0 | 11,198,990 | (17,659,425) | (27,835,900) | 1,774,063 | 5,449,920 | 353,533,534 |
| 2027 | 0 | 11,087,715 | (17,496,975) | (27,561,900) | 1,774,063 | 5,449,920 | 346,719,126 |
| 2028 | 0 | 11,118,543 | (17,553,850) | (27,639,425) | 1,774,063 | 5,449,920 | 350,074,815 |
| 2029 | 0 | 11,017,868 | (17,400,125) | (27,390,825) | 1,774,063 | 5,449,920 | 345,974,701 |
| 2030 | 0 | 11,056,349 | (17,443,875) | (27,483,675) | 1,774,063 | 5,449,920 | 347,477,426 |
| 2031 | 0 | 11,044,133 | (17,427,900) | (27,453,950) | 1,774,063 | 5,449,920 | 348,783,275 |
| 2032 | 0 | 11,134,173 | (17,550,750) | (27,674,350) | 1,774,063 | 5,449,920 | 348,502,596 |
| 2033 | 0 | 11,052,397 | (17,437,500) | (27,473,650) | 1,774,063 | 5,449,920 | 349,863,818 |
| 2034 | 0 | 11,135,933 | (17,550,500) | (27,678,375) | 1,774,063 | 5,449,920 | 348,763,852 |
| 2035 | 0 | 10,301,790 | (16,353,375) | (25,626,375) | 1,774,063 | 5,449,920 | 332,968,549 |
| TOTAL | 78,758 | 332,711,539 | (602,538,578) | (1,030,988,520) | 56,706,029 | 148,422,645 | 10,077,534,706 |

Tables B-4 through B-31

Note: Where applicable, the projected data values shown in this appendix are shaded and the bill year data are in **bold** type.

TABLE B-4. Maximum Contractual Table A Amounts

(in acre-feet)

Sheet 1 of 4

| Calendar Year | NORTH BAY AREA | | | SOUTH BAY AREA (a) | | | | CENTRAL COASTAL AREA | | |
|------------------|------------------------------|------------------------|-----------|--|--|--|------------|--|--------------------------------------|-----------|
| | Napa (b) County FC&WCD | Solano County WA | Total | Alameda County FC&WCD, Zone 7 | Alameda County Water District | Santa Clara Valley Water District | Total | San Luis Obispo County FC&WCD | Santa Barbara County FC&WCD | Total |
| | [1] | [2] | [3] | [4] | [5] | [6] | [7] | [8] | [9] | [10] |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 507 | 5,248 | 5,783 | 11,538 | 0 | 0 | 0 |
| 1968 | 0 | 0 | 0 | 6,900 | 15,000 | 88,000 | 109,900 | 0 | 0 | 0 |
| 1969 | 0 | 0 | 0 | 8,200 | 15,500 | 75,000 | 98,700 | 0 | 0 | 0 |
| 1970 | 0 | 0 | 0 | 10,000 | 16,200 | 88,000 | 114,200 | 0 | 0 | 0 |
| 1971 | 0 | 0 | 0 | 11,200 | 17,000 | 88,000 | 116,200 | 0 | 0 | 0 |
| 1972 | 0 | 0 | 0 | 12,400 | 17,900 | 88,000 | 118,300 | 0 | 0 | 0 |
| 1973 | 0 | 0 | 0 | 13,600 | 18,800 | 88,000 | 120,400 | 0 | 0 | 0 |
| 1974 | 0 | 0 | 0 | 14,800 | 19,600 | 88,000 | 122,400 | 0 | 0 | 0 |
| 1975 | 0 | 0 | 0 | 16,000 | 20,500 | 88,000 | 124,500 | 0 | 0 | 0 |
| 1976 | 0 | 0 | 0 | 17,200 | 21,300 | 88,000 | 126,500 | 0 | 0 | 0 |
| 1977 | 0 | 0 | 0 | 18,400 | 22,200 | 88,000 | 128,600 | 0 | 0 | 0 |
| 1978 | 0 | 0 | 0 | 19,600 | 23,100 | 88,000 | 130,700 | 0 | 0 | 0 |
| 1979 | 0 | 0 | 0 | 20,800 | 23,900 | 88,000 | 132,700 | 0 | 0 | 0 |
| 1980 | 0 | 500 | 500 | 22,000 | 24,800 | 88,000 | 134,800 | 1,000 | 946 | 1,946 |
| 1981 | 0 | 650 | 650 | 23,000 | 26,000 | 88,000 | 137,000 | 1,000 | 1,813 | 2,813 |
| 1982 | 0 | 800 | 800 | 24,000 | 27,200 | 88,000 | 139,200 | 2,000 | 3,626 | 5,626 |
| 1983 | 0 | 950 | 950 | 25,000 | 28,400 | 88,000 | 141,400 | 3,000 | 5,439 | 8,439 |
| 1984 | 0 | 1,100 | 1,100 | 26,000 | 29,600 | 88,000 | 143,600 | 4,500 | 8,198 | 12,698 |
| 1985 | 0 | 1,250 | 1,250 | 27,000 | 30,800 | 88,000 | 145,800 | 7,500 | 13,638 | 21,138 |
| 1986 | 0 | 1,400 | 1,400 | 28,000 | 32,100 | 88,000 | 148,100 | 10,000 | 18,210 | 28,210 |
| 1987 | 0 | 1,550 | 1,550 | 29,000 | 33,300 | 88,000 | 150,300 | 12,500 | 22,704 | 35,204 |
| 1988 | 5,745 | 9,726 | 15,471 | 30,000 | 34,500 | 88,000 | 152,500 | 15,500 | 28,222 | 43,722 |
| 1989 | 6,195 | 18,420 | 24,615 | 31,000 | 35,700 | 90,000 | 156,700 | 20,000 | 36,342 | 56,342 |
| 1990 | 6,940 | 21,250 | 28,190 | 32,000 | 36,900 | 92,000 | 160,900 | 25,000 | 45,486 | 70,486 |
| 1991 | 7,290 | 22,300 | 29,590 | 34,000 | 38,400 | 94,000 | 166,400 | 25,000 | 45,486 | 70,486 |
| 1992 | 7,840 | 24,170 | 32,010 | 36,000 | 39,900 | 96,000 | 171,900 | 25,000 | 45,486 | 70,486 |
| 1993 | 8,490 | 26,130 | 34,620 | 38,000 | 41,400 | 98,000 | 177,400 | 25,000 | 45,486 | 70,486 |
| 1994 | 9,135 | 28,080 | 37,215 | 40,000 | 42,000 | 100,000 | 182,000 | 25,000 | 45,486 | 70,486 |
| 1995 | 9,780 | 34,250 | 44,030 | 42,000 | 42,000 | 100,000 | 184,000 | 25,000 | 45,486 | 70,486 |
| 1996 | 10,425 | 37,800 | 48,225 | 44,000 | 42,000 | 100,000 | 186,000 | 25,000 | 45,486 | 70,486 |
| 1997 | 11,065 | 38,250 | 49,315 | 46,000 | 42,000 | 100,000 | 188,000 | 6,215 | 38,986 | 45,201 |
| 1998 | 11,710 | 38,710 | 50,420 | 46,000 | 42,000 | 100,000 | 188,000 | 6,215 | 38,986 | 45,201 |
| 1999 | 15,850 | 39,170 | 55,020 | 46,000 | 42,000 | 100,000 | 188,000 | 25,000 | 45,486 | 70,486 |
| 2000 | 16,325 | 39,620 | 55,945 | 68,000 | 42,000 | 100,000 | 210,000 | 25,000 | 45,486 | 70,486 |
| 2001 | 20,725 | 45,836 | 66,561 | 78,000 | 42,000 | 100,000 | 220,000 | 25,000 | 45,486 | 70,486 |
| 2002 | 21,100 | 46,296 | 67,396 | 78,000 | 42,000 | 100,000 | 220,000 | 25,000 | 45,486 | 70,486 |
| 2003 | 21,475 | 46,756 | 68,231 | 78,400 | 42,000 | 100,000 | 220,400 | 25,000 | 45,486 | 70,486 |
| 2004 | 21,850 | 47,206 | 69,056 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| 2005 | 22,225 | 47,256 | 69,481 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| 2006 | 22,550 | 47,306 | 69,856 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| 2007 | 22,875 | 47,356 | 70,231 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| 2008 | 23,200 | 47,406 | 70,606 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| 2009 | 23,525 | 47,456 | 70,981 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| 2010 | 29,025 | 47,506 | 76,531 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| 2011 | 29,025 | 47,556 | 76,581 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| 2012 | 29,025 | 47,606 | 76,631 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| 2013 | 29,025 | 47,656 | 76,681 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| 2014 | 29,025 | 47,706 | 76,731 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| 2015 | 29,025 | 47,756 | 76,781 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| 2016 | 29,025 | 47,756 | 76,781 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| 2017 | 29,025 | 47,756 | 76,781 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| 2018 | 29,025 | 47,756 | 76,781 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| 2019 | 29,025 | 47,756 | 76,781 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| 2020 | 29,025 | 47,756 | 76,781 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| 2021 | 29,025 | 47,756 | 76,781 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| 2022 | 29,025 | 47,756 | 76,781 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| 2023 | 29,025 | 47,756 | 76,781 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| 2024 | 29,025 | 47,756 | 76,781 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| 2025 | 29,025 | 47,756 | 76,781 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| 2026 | 29,025 | 47,756 | 76,781 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| 2027 | 29,025 | 47,756 | 76,781 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| 2028 | 29,025 | 47,756 | 76,781 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| 2029 | 29,025 | 47,756 | 76,781 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| 2030 | 29,025 | 47,756 | 76,781 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| 2031 | 29,025 | 47,756 | 76,781 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| 2032 | 29,025 | 47,756 | 76,781 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| 2033 | 29,025 | 47,756 | 76,781 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| 2034 | 29,025 | 47,756 | 76,781 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| 2035 | 29,025 | 47,756 | 76,781 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| TOTAL | 1,080,965 | 2,049,856 | 3,130,821 | 3,720,815 | 2,459,248 | 6,510,783 | 12,690,846 | 1,189,430 | 2,218,494 | 3,407,924 |

(a) Table A quantities for the South Bay area were supplied by non-Project water for the period June 1962 through November 1967. Actual delivery quantities of Project water are shown for 1967.

(b) District's Table A quantities exclude amounts during the period 1968 through 1987 that were supplied by non-Project water.

TABLE B-4. Maximum Contractual Table A Amounts

(in acre-feet)

Sheet 2 of 4

| Calendar Year | SAN JOAQUIN VALLEY AREA | | | | | | | | |
|------------------|-----------------------------------|---|--------------------------------|--------------|------------|-----------------------|-------------------------------|---|------------|
| | Dudley Ridge Water District | Empire West Side Irrigation District | Kern County Water Agency | | | County of Kings | Oak Flat Water District | Tulare Lake Basin Water Storage District | Total |
| | | | Municipal and Industrial | Agricultural | Total | | | | |
| | [11] | [12] | [13] | [14] | [15] | [16] | [17] | [18] | [19] |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1968 | 14,300 | 1,000 | 0 | 46,600 | 46,600 | 900 | 2,300 | 12,250 | 77,350 |
| 1969 | 14,325 | 3,000 | 0 | 95,700 | 95,700 | 1,200 | 2,500 | 46,350 | 163,075 |
| 1970 | 15,700 | 3,000 | 28,700 | 116,400 | 145,100 | 1,300 | 2,600 | 34,300 | 202,000 |
| 1971 | 17,900 | 3,000 | 35,700 | 154,600 | 190,300 | 1,300 | 2,800 | 36,500 | 251,800 |
| 1972 | 20,000 | 3,000 | 39,200 | 231,500 | 270,700 | 1,400 | 5,366 | 112,600 | 413,066 |
| 1973 | 22,000 | 3,000 | 43,500 | 267,000 | 310,500 | 1,500 | 3,100 | 43,552 | 383,652 |
| 1974 | 33,390 | 3,000 | 48,000 | 299,000 | 347,000 | 1,500 | 3,471 | 72,289 | 460,650 |
| 1975 | 40,555 | 3,000 | 52,700 | 358,120 | 410,820 | 1,600 | 3,576 | 86,258 | 545,809 |
| 1976 | 30,921 | 3,000 | 56,100 | 386,050 | 442,150 | 1,600 | 4,039 | 61,707 | 543,417 |
| 1977 | 30,400 | 3,000 | 60,600 | 423,000 | 483,600 | 1,700 | 3,700 | 59,000 | 581,400 |
| 1978 | 32,500 | 0 | 64,100 | 470,200 | 534,300 | 1,900 | 3,900 | 63,300 | 635,900 |
| 1979 | 38,544 | 3,000 | 67,600 | 516,300 | 583,900 | 2,000 | 4,000 | 71,241 | 702,685 |
| 1980 | 41,000 | 3,000 | 71,100 | 563,400 | 634,500 | 2,200 | 5,700 | 71,700 | 758,100 |
| 1981 | 41,000 | 3,000 | 74,800 | 616,600 | 691,400 | 2,300 | 4,300 | 76,000 | 818,000 |
| 1982 | 41,000 | 3,000 | 79,600 | 665,700 | 745,300 | 2,500 | 4,500 | 80,200 | 876,500 |
| 1983 | 42,900 | 3,000 | 83,500 | 721,600 | 805,100 | 2,800 | 3,770 | 9,548 | 867,118 |
| 1984 | 45,100 | 3,000 | 103,600 | 757,000 | 860,600 | 3,100 | 4,800 | 62,611 | 979,211 |
| 1985 | 47,200 | 3,000 | 108,900 | 806,100 | 915,000 | 3,400 | 4,900 | 45,549 | 1,019,049 |
| 1986 | 49,300 | 3,000 | 113,400 | 820,246 | 933,646 | 3,700 | 5,100 | 97,200 | 1,091,946 |
| 1987 | 51,400 | 3,000 | 119,100 | 904,400 | 1,023,500 | 4,000 | 5,200 | 101,400 | 1,188,500 |
| 1988 | 53,500 | 3,000 | 123,900 | 950,700 | 1,074,600 | 4,000 | 5,400 | 105,600 | 1,246,100 |
| 1989 | 55,600 | 3,000 | 128,200 | 984,100 | 1,112,300 | 4,000 | 5,600 | 109,900 | 1,290,400 |
| 1990 | 28,850 | 3,000 | 134,600 | 1,018,800 | 1,153,400 | 4,000 | 5,700 | 118,500 | 1,313,450 |
| 1991 | 53,411 | 3,000 | 134,600 | 1,018,800 | 1,153,400 | 4,000 | 5,700 | 118,500 | 1,338,011 |
| 1992 | 57,700 | 3,000 | 134,600 | 1,018,800 | 1,153,400 | 4,000 | 5,700 | 118,500 | 1,342,300 |
| 1993 | 57,700 | 3,000 | 134,600 | 1,018,800 | 1,153,400 | 4,000 | 5,700 | 118,500 | 1,342,300 |
| 1994 | 57,700 | 3,000 | 134,600 | 1,018,800 | 1,153,400 | 4,000 | 5,700 | 118,500 | 1,342,300 |
| 1995 | 57,700 | 3,000 | 134,600 | 1,018,800 | 1,153,400 | 4,000 | 5,700 | 118,500 | 1,342,300 |
| 1996 | 53,370 | 3,000 | 134,600 | 982,460 | 1,117,060 | 4,000 | 5,700 | 118,500 | 1,301,630 |
| 1997 | 53,370 | 3,000 | 134,600 | 978,130 | 1,112,730 | 4,000 | 5,700 | 118,500 | 1,297,300 |
| 1998 | 53,370 | 3,000 | 134,600 | 953,130 | 1,087,730 | 4,000 | 5,700 | 118,500 | 1,272,300 |
| 1999 | 53,370 | 3,000 | 134,600 | 953,130 | 1,087,730 | 4,000 | 5,700 | 118,500 | 1,272,300 |
| 2000 | 53,370 | 3,000 | 134,600 | 886,130 | 1,020,730 | 4,000 | 5,700 | 118,500 | 1,205,300 |
| 2001 | 53,370 | 3,000 | 134,600 | 866,349 | 1,000,949 | 4,000 | 5,700 | 118,500 | 1,185,519 |
| 2002 | 57,343 | 3,000 | 134,600 | 866,349 | 1,000,949 | 4,000 | 5,700 | 111,527 | 1,182,519 |
| 2003 | 57,343 | 3,000 | 134,600 | 866,349 | 1,000,949 | 4,000 | 5,700 | 111,127 | 1,182,119 |
| 2004 | 57,343 | 3,000 | 134,600 | 864,130 | 998,730 | 9,000 | 5,700 | 96,227 | 1,170,000 |
| 2005 | 57,343 | 3,000 | 134,600 | 864,130 | 998,730 | 9,000 | 5,700 | 96,227 | 1,170,000 |
| 2006 | 57,343 | 3,000 | 134,600 | 864,130 | 998,730 | 9,305 | 5,700 | 95,922 | 1,170,000 |
| 2007 | 57,343 | 3,000 | 134,600 | 864,130 | 998,730 | 9,305 | 5,700 | 95,922 | 1,170,000 |
| 2008 | 57,343 | 3,000 | 134,600 | 864,130 | 998,730 | 9,305 | 5,700 | 95,922 | 1,170,000 |
| 2009 | 57,343 | 3,000 | 134,600 | 864,130 | 998,730 | 9,305 | 5,700 | 95,922 | 1,170,000 |
| 2010 | 50,343 | 3,000 | 134,600 | 848,130 | 982,730 | 9,305 | 5,700 | 88,922 | 1,140,000 |
| 2011 | 50,343 | 3,000 | 134,600 | 848,130 | 982,730 | 9,305 | 5,700 | 88,922 | 1,140,000 |
| 2012 | 50,343 | 3,000 | 134,600 | 848,130 | 982,730 | 9,305 | 5,700 | 88,922 | 1,140,000 |
| 2013 | 50,343 | 3,000 | 134,600 | 848,130 | 982,730 | 9,305 | 5,700 | 88,922 | 1,140,000 |
| 2014 | 50,343 | 3,000 | 134,600 | 848,130 | 982,730 | 9,305 | 5,700 | 88,922 | 1,140,000 |
| 2015 | 47,343 | 3,000 | 134,600 | 848,130 | 982,730 | 9,305 | 5,700 | 88,922 | 1,137,000 |
| 2016 | 47,343 | 3,000 | 134,600 | 848,130 | 982,730 | 9,305 | 5,700 | 88,922 | 1,137,000 |
| 2017 | 47,343 | 3,000 | 134,600 | 848,130 | 982,730 | 9,305 | 5,700 | 88,922 | 1,137,000 |
| 2018 | 47,343 | 3,000 | 134,600 | 848,130 | 982,730 | 9,305 | 5,700 | 88,922 | 1,137,000 |
| 2019 | 47,343 | 3,000 | 134,600 | 848,130 | 982,730 | 9,305 | 5,700 | 88,922 | 1,137,000 |
| 2020 | 43,343 | 3,000 | 134,600 | 848,130 | 982,730 | 9,305 | 5,700 | 88,922 | 1,133,000 |
| 2021 | 43,343 | 3,000 | 134,600 | 848,130 | 982,730 | 9,305 | 5,700 | 88,922 | 1,133,000 |
| 2022 | 43,343 | 3,000 | 134,600 | 848,130 | 982,730 | 9,305 | 5,700 | 88,922 | 1,133,000 |
| 2023 | 43,343 | 3,000 | 134,600 | 848,130 | 982,730 | 9,305 | 5,700 | 88,922 | 1,133,000 |
| 2024 | 43,343 | 3,000 | 134,600 | 848,130 | 982,730 | 9,305 | 5,700 | 88,922 | 1,133,000 |
| 2025 | 43,343 | 3,000 | 134,600 | 848,130 | 982,730 | 9,305 | 5,700 | 88,922 | 1,133,000 |
| 2026 | 43,343 | 3,000 | 134,600 | 848,130 | 982,730 | 9,305 | 5,700 | 88,922 | 1,133,000 |
| 2027 | 43,343 | 3,000 | 134,600 | 848,130 | 982,730 | 9,305 | 5,700 | 88,922 | 1,133,000 |
| 2028 | 43,343 | 3,000 | 134,600 | 848,130 | 982,730 | 9,305 | 5,700 | 88,922 | 1,133,000 |
| 2029 | 43,343 | 3,000 | 134,600 | 848,130 | 982,730 | 9,305 | 5,700 | 88,922 | 1,133,000 |
| 2030 | 43,343 | 3,000 | 134,600 | 848,130 | 982,730 | 9,305 | 5,700 | 88,922 | 1,133,000 |
| 2031 | 43,343 | 3,000 | 134,600 | 848,130 | 982,730 | 9,305 | 5,700 | 88,922 | 1,133,000 |
| 2032 | 43,343 | 3,000 | 134,600 | 848,130 | 982,730 | 9,305 | 5,700 | 88,922 | 1,133,000 |
| 2033 | 43,343 | 3,000 | 134,600 | 848,130 | 982,730 | 9,305 | 5,700 | 88,922 | 1,133,000 |
| 2034 | 43,343 | 3,000 | 134,600 | 848,130 | 982,730 | 9,305 | 5,700 | 88,922 | 1,133,000 |
| 2035 | 43,343 | 3,000 | 134,600 | 848,130 | 982,730 | 9,305 | 5,700 | 88,922 | 1,133,000 |
| TOTAL | 3,052,478 | 199,000 | 7,693,900 | 51,855,303 | 59,549,203 | 403,050 | 352,822 | 5,991,823 | 69,548,376 |

TABLE B-4. Maximum Contractual Table A Amounts

(in acre-feet)

Sheet 3 of 4

| Calendar Year | SOUTHERN CALIFORNIA AREA | | | | | | | | | |
|------------------|---|------------------------------------|--|--|---------------------------|---|---------------------------|-------------------------------|--|---|
| | Antelope Valley- East Kern Water Agency | Castaic Lake Water Agency | Coachella Valley Water District | Crestline- Lake Arrowhead Water Agency | Desert Water Agency | Littlerock Creek Irrigation District | Mojave Water Agency | Palmdale Water District | San Bernardino Valley Municipal Water District | San Gabriel Valley Municipal Water District |
| | [20] | [21] | [22] | [23] | [24] | [25] | [26] | [27] | [28] | [29] |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1968 | 0 | 3,700 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1969 | 0 | 5,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1970 | 0 | 5,700 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1971 | 0 | 6,700 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1972 | 20,000 | 8,936 | 5,200 | 526 | 8,000 | 170 | 8,400 | 1,620 | 1,677 | 122 |
| 1973 | 25,000 | 12,400 | 5,800 | 870 | 9,000 | 290 | 10,700 | 2,940 | 48,000 | 11,500 |
| 1974 | 30,000 | 15,400 | 6,400 | 1,160 | 10,000 | 400 | 13,100 | 4,260 | 50,000 | 12,300 |
| 1975 | 35,000 | 18,200 | 7,000 | 1,450 | 11,000 | 520 | 15,400 | 5,580 | 52,500 | 13,100 |
| 1976 | 44,000 | 21,200 | 7,600 | 1,740 | 12,000 | 640 | 17,800 | 6,900 | 55,000 | 14,000 |
| 1977 | 50,000 | 24,100 | 8,421 | 2,030 | 13,000 | 730 | 20,200 | 8,220 | 57,500 | 14,800 |
| 1978 | 57,000 | 24,762 | 9,242 | 2,320 | 14,000 | 920 | 22,000 | 9,340 | 60,000 | 15,700 |
| 1979 | 63,000 | 28,000 | 10,063 | 2,610 | 15,000 | 1,040 | 24,900 | 10,260 | 62,500 | 16,600 |
| 1980 | 69,200 | 30,400 | 10,884 | 2,900 | 17,000 | 1,150 | 27,200 | 11,180 | 65,500 | 17,400 |
| 1981 | 75,000 | 32,800 | 12,105 | 3,190 | 19,000 | 1,270 | 23,100 | 11,700 | 68,500 | 18,300 |
| 1982 | 81,300 | 34,800 | 13,326 | 3,480 | 21,000 | 1,380 | 22,843 | 12,320 | 71,500 | 19,100 |
| 1983 | 87,700 | 37,300 | 14,547 | 3,770 | 23,000 | 1,500 | 34,300 | 12,940 | 74,500 | 19,900 |
| 1984 | 35,000 | 39,600 | 15,768 | 4,060 | 25,000 | 1,610 | 36,700 | 13,560 | 78,000 | 20,700 |
| 1985 | 40,000 | 41,800 | 16,989 | 4,350 | 27,000 | 1,730 | 39,000 | 14,180 | 81,500 | 21,800 |
| 1986 | 42,000 | 43,600 | 18,210 | 4,640 | 29,000 | 1,840 | 41,400 | 14,800 | 85,000 | 23,200 |
| 1987 | 44,000 | 45,600 | 19,431 | 4,930 | 31,500 | 1,960 | 43,700 | 15,420 | 89,000 | 24,600 |
| 1988 | 46,000 | 48,000 | 20,652 | 5,220 | 34,000 | 2,070 | 46,000 | 16,040 | 93,000 | 26,000 |
| 1989 | 125,700 | 50,100 | 21,873 | 5,510 | 36,500 | 2,190 | 48,500 | 16,660 | 97,000 | 27,400 |
| 1990 | 132,100 | 52,000 | 23,100 | 5,800 | 38,100 | 2,300 | 50,800 | 17,300 | 101,500 | 28,800 |
| 1991 | 138,400 | 54,200 | 23,100 | 5,800 | 38,100 | 2,300 | 50,800 | 17,300 | 102,600 | 28,800 |
| 1992 | 138,400 | 54,200 | 23,100 | 5,800 | 38,100 | 2,300 | 50,800 | 17,300 | 102,600 | 28,800 |
| 1993 | 138,400 | 54,200 | 23,100 | 5,800 | 38,100 | 2,300 | 50,800 | 17,300 | 102,600 | 28,800 |
| 1994 | 138,400 | 54,200 | 23,100 | 5,800 | 38,100 | 2,300 | 50,800 | 17,300 | 102,600 | 28,800 |
| 1995 | 138,400 | 54,200 | 23,100 | 5,800 | 38,100 | 2,300 | 50,800 | 17,300 | 102,600 | 28,800 |
| 1996 | 138,400 | 54,200 | 23,100 | 5,800 | 38,100 | 2,300 | 50,800 | 17,300 | 102,600 | 28,800 |
| 1997 | 138,400 | 54,200 | 23,100 | 5,800 | 38,100 | 2,300 | 50,800 | 17,300 | 102,600 | 28,800 |
| 1998 | 138,400 | 54,200 | 23,100 | 5,800 | 38,100 | 2,300 | 75,800 | 17,300 | 102,600 | 28,800 |
| 1999 | 138,400 | 54,200 | 23,100 | 5,800 | 38,100 | 2,300 | 75,800 | 17,300 | 102,600 | 28,800 |
| 2000 | 138,400 | 95,200 | 23,100 | 5,800 | 38,100 | 2,300 | 75,800 | 21,300 | 102,600 | 28,800 |
| 2001 | 138,400 | 95,200 | 23,100 | 5,800 | 38,100 | 2,300 | 75,800 | 21,300 | 102,600 | 28,800 |
| 2002 | 141,400 | 95,200 | 23,100 | 5,800 | 38,100 | 2,300 | 75,800 | 21,300 | 102,600 | 28,800 |
| 2003 | 141,400 | 95,200 | 23,100 | 5,800 | 38,100 | 2,300 | 75,800 | 21,300 | 102,600 | 28,800 |
| 2004 | 141,400 | 95,200 | 33,000 | 5,800 | 38,100 | 2,300 | 75,800 | 21,300 | 102,600 | 28,800 |
| 2005 | 141,400 | 95,200 | 121,100 | 5,800 | 50,000 | 2,300 | 75,800 | 21,300 | 102,600 | 28,800 |
| 2006 | 141,400 | 95,200 | 121,100 | 5,800 | 50,000 | 2,300 | 75,800 | 21,300 | 102,600 | 28,800 |
| 2007 | 141,400 | 95,200 | 121,100 | 5,800 | 50,000 | 2,300 | 75,800 | 21,300 | 102,600 | 28,800 |
| 2008 | 141,400 | 95,200 | 121,100 | 5,800 | 50,000 | 2,300 | 75,800 | 21,300 | 102,600 | 28,800 |
| 2009 | 141,400 | 95,200 | 121,100 | 5,800 | 50,000 | 2,300 | 75,800 | 21,300 | 102,600 | 28,800 |
| 2010 | 141,400 | 95,200 | 138,350 | 5,800 | 55,750 | 2,300 | 82,800 | 21,300 | 102,600 | 28,800 |
| 2011 | 141,400 | 95,200 | 138,350 | 5,800 | 55,750 | 2,300 | 82,800 | 21,300 | 102,600 | 28,800 |
| 2012 | 141,400 | 95,200 | 138,350 | 5,800 | 55,750 | 2,300 | 82,800 | 21,300 | 102,600 | 28,800 |
| 2013 | 141,400 | 95,200 | 138,350 | 5,800 | 55,750 | 2,300 | 82,800 | 21,300 | 102,600 | 28,800 |
| 2014 | 141,400 | 95,200 | 138,350 | 5,800 | 55,750 | 2,300 | 82,800 | 21,300 | 102,600 | 28,800 |
| 2015 | 141,400 | 95,200 | 138,350 | 5,800 | 55,750 | 2,300 | 85,800 | 21,300 | 102,600 | 28,800 |
| 2016 | 141,400 | 95,200 | 138,350 | 5,800 | 55,750 | 2,300 | 85,800 | 21,300 | 102,600 | 28,800 |
| 2017 | 141,400 | 95,200 | 138,350 | 5,800 | 55,750 | 2,300 | 85,800 | 21,300 | 102,600 | 28,800 |
| 2018 | 141,400 | 95,200 | 138,350 | 5,800 | 55,750 | 2,300 | 85,800 | 21,300 | 102,600 | 28,800 |
| 2019 | 141,400 | 95,200 | 138,350 | 5,800 | 55,750 | 2,300 | 85,800 | 21,300 | 102,600 | 28,800 |
| 2020 | 141,400 | 95,200 | 138,350 | 5,800 | 55,750 | 2,300 | 89,800 | 21,300 | 102,600 | 28,800 |
| 2021 | 141,400 | 95,200 | 138,350 | 5,800 | 55,750 | 2,300 | 89,800 | 21,300 | 102,600 | 28,800 |
| 2022 | 141,400 | 95,200 | 138,350 | 5,800 | 55,750 | 2,300 | 89,800 | 21,300 | 102,600 | 28,800 |
| 2023 | 141,400 | 95,200 | 138,350 | 5,800 | 55,750 | 2,300 | 89,800 | 21,300 | 102,600 | 28,800 |
| 2024 | 141,400 | 95,200 | 138,350 | 5,800 | 55,750 | 2,300 | 89,800 | 21,300 | 102,600 | 28,800 |
| 2025 | 141,400 | 95,200 | 138,350 | 5,800 | 55,750 | 2,300 | 89,800 | 21,300 | 102,600 | 28,800 |
| 2026 | 141,400 | 95,200 | 138,350 | 5,800 | 55,750 | 2,300 | 89,800 | 21,300 | 102,600 | 28,800 |
| 2027 | 141,400 | 95,200 | 138,350 | 5,800 | 55,750 | 2,300 | 89,800 | 21,300 | 102,600 | 28,800 |
| 2028 | 141,400 | 95,200 | 138,350 | 5,800 | 55,750 | 2,300 | 89,800 | 21,300 | 102,600 | 28,800 |
| 2029 | 141,400 | 95,200 | 138,350 | 5,800 | 55,750 | 2,300 | 89,800 | 21,300 | 102,600 | 28,800 |
| 2030 | 141,400 | 95,200 | 138,350 | 5,800 | 55,750 | 2,300 | 89,800 | 21,300 | 102,600 | 28,800 |
| 2031 | 141,400 | 95,200 | 138,350 | 5,800 | 55,750 | 2,300 | 89,800 | 21,300 | 102,600 | 28,800 |
| 2032 | 141,400 | 95,200 | 138,350 | 5,800 | 55,750 | 2,300 | 89,800 | 21,300 | 102,600 | 28,800 |
| 2033 | 141,400 | 95,200 | 138,350 | 5,800 | 55,750 | 2,300 | 89,800 | 21,300 | 102,600 | 28,800 |
| 2034 | 141,400 | 95,200 | 138,350 | 5,800 | 55,750 | 2,300 | 89,800 | 21,300 | 102,600 | 28,800 |
| 2035 | 141,400 | 95,200 | 138,350 | 5,800 | 55,750 | 2,300 | 89,800 | 21,300 | 102,600 | 28,800 |
| TOTAL | 7,432,000 | 4,545,098 | 4,782,511 | 321,556 | 2,626,000 | 127,210 | 4,069,043 | 1,127,720 | 5,909,177 | 1,641,322 |

TABLE B-4. Maximum Contractual Table A Amounts

(in acre-feet)

Sheet 4 of 4

| Calendar Year | SOUTHERN CALIFORNIA AREA | | | | FEATHER RIVER AREA | | | | South Bay Area Future Contractor | GRAND TOTAL |
|------------------|---|--|---|-------------|----------------------|--------------------|----------------------------|-----------|---|----------------|
| | San Geronio Pass Water Agency | The Metropolitan Water District of Southern California | Ventura County Flood Control District | Total | City of Yuba City | County of Butte | Plumas County FC&WCD | Total | | |
| | [30] | [31] | [32] | [33] | [34] | [35] | [36] | [37] | [38] | [39] |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11,538 |
| 1968 | 0 | 0 | 0 | 3,700 | 0 | 300 | 250 | 550 | 0 | 191,500 |
| 1969 | 0 | 0 | 0 | 5,000 | 0 | 350 | 270 | 620 | 0 | 267,395 |
| 1970 | 0 | 0 | 0 | 5,700 | 0 | 400 | 300 | 700 | 0 | 322,600 |
| 1971 | 0 | 0 | 0 | 6,700 | 0 | 450 | 440 | 890 | 0 | 375,590 |
| 1972 | 0 | 154,772 | 0 | 209,423 | 0 | 500 | 470 | 970 | 0 | 741,759 |
| 1973 | 0 | 354,600 | 0 | 481,100 | 0 | 600 | 500 | 1,100 | 0 | 986,252 |
| 1974 | 0 | 454,900 | 0 | 597,920 | 0 | 700 | 530 | 1,230 | 0 | 1,182,200 |
| 1975 | 0 | 555,200 | 0 | 714,950 | 0 | 1,050 | 560 | 1,610 | 0 | 1,386,869 |
| 1976 | 0 | 655,600 | 0 | 836,480 | 0 | 1,400 | 590 | 1,990 | 0 | 1,508,387 |
| 1977 | 0 | 755,900 | 0 | 954,901 | 0 | 1,800 | 620 | 2,420 | 0 | 1,667,321 |
| 1978 | 0 | 856,300 | 0 | 1,049,584 | 0 | 1,200 | 650 | 1,850 | 0 | 1,818,034 |
| 1979 | 0 | 956,600 | 0 | 1,190,573 | 0 | 1,450 | 680 | 2,130 | 0 | 2,028,088 |
| 1980 | 6,800 | 1,057,000 | 1,000 | 1,317,614 | 0 | 1,100 | 710 | 1,810 | 0 | 2,214,770 |
| 1981 | 7,800 | 1,157,300 | 2,000 | 1,432,065 | 0 | 1,200 | 740 | 1,940 | 0 | 2,392,468 |
| 1982 | 8,800 | 1,257,600 | 3,000 | 1,550,449 | 0 | 1,200 | 770 | 1,970 | 0 | 2,574,545 |
| 1983 | 9,800 | 1,358,000 | 4,000 | 1,681,257 | 0 | 1,200 | 800 | 2,000 | 0 | 2,701,164 |
| 1984 | 10,800 | 1,458,300 | 5,000 | 1,744,098 | 1,600 | 1,200 | 830 | 3,630 | 0 | 2,884,337 |
| 1985 | 11,800 | 1,558,700 | 6,000 | 1,864,849 | 1,700 | 1,200 | 860 | 3,760 | 0 | 3,055,846 |
| 1986 | 12,900 | 1,659,300 | 8,000 | 1,983,890 | 2,100 | 1,200 | 890 | 4,190 | 0 | 3,257,736 |
| 1987 | 14,000 | 1,759,800 | 10,000 | 2,103,941 | 2,500 | 1,200 | 920 | 4,620 | 0 | 3,484,115 |
| 1988 | 15,100 | 1,860,400 | 13,000 | 2,225,482 | 2,900 | 1,200 | 960 | 5,060 | 0 | 3,688,335 |
| 1989 | 16,200 | 1,961,000 | 16,000 | 2,424,633 | 3,300 | 1,200 | 1,000 | 5,500 | 0 | 3,958,190 |
| 1990 | 17,300 | 2,011,500 | 20,000 | 2,500,600 | 3,800 | 1,200 | 1,040 | 6,040 | 0 | 4,079,666 |
| 1991 | 17,300 | 2,011,500 | 20,000 | 2,510,200 | 9,600 | 1,200 | 1,080 | 11,880 | 0 | 4,126,567 |
| 1992 | 17,300 | 2,011,500 | 20,000 | 2,510,200 | 9,600 | 1,200 | 1,120 | 11,920 | 0 | 4,138,816 |
| 1993 | 17,300 | 2,011,500 | 20,000 | 2,510,200 | 9,600 | 1,200 | 1,160 | 11,960 | 0 | 4,146,966 |
| 1994 | 17,300 | 2,011,500 | 20,000 | 2,510,200 | 9,600 | 1,200 | 1,200 | 12,000 | 0 | 4,154,201 |
| 1995 | 17,300 | 2,011,500 | 20,000 | 2,510,200 | 9,600 | 1,200 | 1,250 | 12,050 | 0 | 4,163,066 |
| 1996 | 0 | 2,011,500 | 20,000 | 2,492,900 | 9,600 | 1,200 | 1,300 | 12,100 | 0 | 4,111,341 |
| 1997 | 0 | 2,011,500 | 20,000 | 2,492,900 | 9,600 | 1,200 | 1,350 | 12,150 | 0 | 4,084,866 |
| 1998 | 0 | 2,011,500 | 20,000 | 2,517,900 | 9,600 | 1,200 | 1,400 | 12,200 | 0 | 4,086,021 |
| 1999 | 2,000 | 2,011,500 | 20,000 | 2,519,900 | 9,600 | 2,890 | 1,450 | 13,940 | 0 | 4,119,646 |
| 2000 | 3,000 | 2,011,500 | 20,000 | 2,565,900 | 9,600 | 2,890 | 1,510 | 14,000 | 0 | 4,121,631 |
| 2001 | 4,000 | 2,011,500 | 20,000 | 2,566,900 | 9,600 | 3,500 | 1,570 | 14,670 | 0 | 4,124,136 |
| 2002 | 4,000 | 2,011,500 | 20,000 | 2,569,900 | 9,600 | 3,500 | 1,630 | 14,730 | 0 | 4,125,031 |
| 2003 | 5,000 | 2,011,500 | 20,000 | 2,570,900 | 9,600 | 3,500 | 1,690 | 14,790 | 0 | 4,126,926 |
| 2004 | 6,000 | 2,011,500 | 20,000 | 2,581,800 | 9,600 | 3,500 | 0 | 13,100 | 0 | 4,127,061 |
| 2005 | 6,500 | 1,911,500 | 20,000 | 2,582,300 | 9,600 | 1,200 | 0 | 10,800 | 0 | 4,125,686 |
| 2006 | 7,000 | 1,911,500 | 20,000 | 2,582,800 | 9,600 | 1,200 | 324 | 11,124 | 0 | 4,126,885 |
| 2007 | 8,650 | 1,911,500 | 20,000 | 2,584,450 | 9,600 | 1,200 | 720 | 11,520 | 0 | 4,129,306 |
| 2008 | 17,300 | 1,911,500 | 20,000 | 2,593,100 | 9,600 | 27,500 | 2,020 | 39,120 | 0 | 4,165,931 |
| 2009 | 17,300 | 1,911,500 | 20,000 | 2,593,100 | 9,600 | 27,500 | 2,090 | 39,190 | 0 | 4,166,376 |
| 2010 | 17,300 | 1,911,500 | 20,000 | 2,623,100 | 9,600 | 27,500 | 2,160 | 39,260 | 0 | 4,171,996 |
| 2011 | 17,300 | 1,911,500 | 20,000 | 2,623,100 | 9,600 | 27,500 | 2,240 | 39,340 | 0 | 4,172,126 |
| 2012 | 17,300 | 1,911,500 | 20,000 | 2,623,100 | 9,600 | 27,500 | 2,320 | 39,420 | 0 | 4,172,256 |
| 2013 | 17,300 | 1,911,500 | 20,000 | 2,623,100 | 9,600 | 27,500 | 2,410 | 39,510 | 0 | 4,172,396 |
| 2014 | 17,300 | 1,911,500 | 20,000 | 2,623,100 | 9,600 | 27,500 | 2,500 | 39,600 | 0 | 4,172,536 |
| 2015 | 17,300 | 1,911,500 | 20,000 | 2,626,100 | 9,600 | 27,500 | 2,600 | 39,700 | 0 | 4,172,686 |
| 2016 | 17,300 | 1,911,500 | 20,000 | 2,626,100 | 9,600 | 27,500 | 2,700 | 39,800 | 0 | 4,172,786 |
| 2017 | 17,300 | 1,911,500 | 20,000 | 2,626,100 | 9,600 | 27,500 | 2,700 | 39,800 | 0 | 4,172,786 |
| 2018 | 17,300 | 1,911,500 | 20,000 | 2,626,100 | 9,600 | 27,500 | 2,700 | 39,800 | 0 | 4,172,786 |
| 2019 | 17,300 | 1,911,500 | 20,000 | 2,626,100 | 9,600 | 27,500 | 2,700 | 39,800 | 0 | 4,172,786 |
| 2020 | 17,300 | 1,911,500 | 20,000 | 2,630,100 | 9,600 | 27,500 | 2,700 | 39,800 | 0 | 4,172,786 |
| 2021 | 17,300 | 1,911,500 | 20,000 | 2,630,100 | 9,600 | 27,500 | 2,700 | 39,800 | 0 | 4,172,786 |
| 2022 | 17,300 | 1,911,500 | 20,000 | 2,630,100 | 9,600 | 27,500 | 2,700 | 39,800 | 0 | 4,172,786 |
| 2023 | 17,300 | 1,911,500 | 20,000 | 2,630,100 | 9,600 | 27,500 | 2,700 | 39,800 | 0 | 4,172,786 |
| 2024 | 17,300 | 1,911,500 | 20,000 | 2,630,100 | 9,600 | 27,500 | 2,700 | 39,800 | 0 | 4,172,786 |
| 2025 | 17,300 | 1,911,500 | 20,000 | 2,630,100 | 9,600 | 27,500 | 2,700 | 39,800 | 0 | 4,172,786 |
| 2026 | 17,300 | 1,911,500 | 20,000 | 2,630,100 | 9,600 | 27,500 | 2,700 | 39,800 | 0 | 4,172,786 |
| 2027 | 17,300 | 1,911,500 | 20,000 | 2,630,100 | 9,600 | 27,500 | 2,700 | 39,800 | 0 | 4,172,786 |
| 2028 | 17,300 | 1,911,500 | 20,000 | 2,630,100 | 9,600 | 27,500 | 2,700 | 39,800 | 0 | 4,172,786 |
| 2029 | 17,300 | 1,911,500 | 20,000 | 2,630,100 | 9,600 | 27,500 | 2,700 | 39,800 | 0 | 4,172,786 |
| 2030 | 17,300 | 1,911,500 | 20,000 | 2,630,100 | 9,600 | 27,500 | 2,700 | 39,800 | 0 | 4,172,786 |
| 2031 | 17,300 | 1,911,500 | 20,000 | 2,630,100 | 9,600 | 27,500 | 2,700 | 39,800 | 0 | 4,172,786 |
| 2032 | 17,300 | 1,911,500 | 20,000 | 2,630,100 | 9,600 | 27,500 | 2,700 | 39,800 | 0 | 4,172,786 |
| 2033 | 17,300 | 1,911,500 | 20,000 | 2,630,100 | 9,600 | 27,500 | 2,700 | 39,800 | 0 | 4,172,786 |
| 2034 | 17,300 | 1,911,500 | 20,000 | 2,630,100 | 9,600 | 27,500 | 2,700 | 39,800 | 0 | 4,172,786 |
| 2035 | 17,300 | 1,911,500 | 20,000 | 2,630,100 | 9,600 | 27,500 | 2,700 | 39,800 | 0 | 4,172,786 |
| TOTAL | 748,350 | 109,260,272 | 988,000 | 143,578,259 | 449,900 | 826,280 | 106,474 | 1,382,654 | 0 | 233,738,880 |

**TABLE B-5A. Annual Water Quantities Delivered from
Each Aqueduct Reach to Each Contractor**

(in acre-feet)

Sheet 1 of 18

| Calendar Year | Grizzly Valley Pipeline PC FC&WCD | NORTH BAY AQUEDUCT | | | | | | SOUTH BAY AQUEDUCT | | | |
|------------------|---|---------------------|--------------------------|------------------|------------------------------|------------------|-----------|--------------------|---------|---------|---------|
| | | Reach 1 SCWA | Reach 3A NC FC&WCD | Reach 3A SCWA | Reach 3B NC (a) FC&WCD | Reach 3B SCWA | Total | Reach 1 | | Reach 2 | Reach 4 |
| | | | | | | | | ACWD | AC | AC | AC |
| | | | | | | | | | | | |
| [1] | [2] | [3] | [4] | [5] | [6] | [7] | [8] | [9] | [10] | [11] | |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8,412 | 141 | 353 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10,914 | 814 | 917 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19,238 | 248 | 1,425 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15,280 | 637 | 1,830 | 138 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,475 | 2,537 | 499 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,527 | 2,391 | 862 |
| 1968 | 0 | 0 | 0 | 0 | 1,214 | 0 | 1,214 | 0 | 1,608 | 3,799 | 721 |
| 1969 | 0 | 0 | 0 | 0 | 2,687 | 0 | 2,687 | 0 | 1,165 | 3,459 | 1,851 |
| 1970 | 70 | 0 | 0 | 0 | 3,618 | 0 | 3,618 | 0 | 1,345 | 4,558 | 3,182 |
| 1971 | 64 | 0 | 0 | 0 | 2,521 | 0 | 2,521 | 0 | 546 | 1,908 | 2,403 |
| 1972 | 505 | 0 | 0 | 0 | 3,647 | 0 | 3,647 | 0 | 1,066 | 4,605 | 2,041 |
| 1973 | 679 | 0 | 0 | 0 | 3,792 | 0 | 3,792 | 0 | 430 | 1,123 | 1,193 |
| 1974 | 648 | 0 | 0 | 0 | 4,870 | 0 | 4,870 | 0 | 177 | 0 | 975 |
| 1975 | 405 | 0 | 0 | 0 | 6,840 | 0 | 6,840 | 0 | 137 | 1,783 | 1,864 |
| 1976 | 382 | 0 | 0 | 0 | 7,122 | 0 | 7,122 | 0 | 265 | 7,204 | 3,384 |
| 1977 | 303 | 0 | 0 | 0 | 8,226 | 0 | 8,226 | 0 | 210 | 4,491 | 2,213 |
| 1978 | 278 | 0 | 0 | 0 | 6,034 | 0 | 6,034 | 0 | 422 | 2,426 | 3,754 |
| 1979 | 329 | 0 | 0 | 0 | 6,561 | 0 | 6,561 | 0 | 197 | 4,283 | 5,567 |
| 1980 | 295 | 0 | 0 | 0 | 6,707 | 0 | 6,707 | 0 | 77 | 3,883 | 6,686 |
| 1981 | 355 | 0 | 0 | 0 | 9,001 | 0 | 9,001 | 0 | 1,250 | 4,648 | 5,273 |
| 1982 | 305 | 0 | 0 | 0 | 1,213 | 0 | 1,213 | 0 | 473 | 3,043 | 4,406 |
| 1983 | 262 | 0 | 0 | 0 | 2,287 | 0 | 2,287 | 0 | 179 | 2,712 | 1,714 |
| 1984 | 272 | 0 | 0 | 0 | 2,923 | 0 | 2,923 | 0 | 165 | 4,219 | 2,219 |
| 1985 | 254 | 0 | 0 | 0 | 4,039 | 0 | 4,039 | 0 | 213 | 5,199 | 2,060 |
| 1986 | 317 | 1,400 | 0 | 0 | 3,519 | 0 | 4,919 | 0 | 200 | 6,052 | 2,062 |
| 1987 | 452 | 1,550 | 0 | 0 | 7,693 | 0 | 9,243 | 0 | 218 | 7,538 | 2,372 |
| 1988 | 523 | 1 | 0 | 9,725 | 5,392 | 0 | 15,118 | 0 | 222 | 8,302 | 4,681 |
| 1989 | 486 | 10 | 0 | 17,246 | 6,195 | 0 | 23,451 | 0 | 222 | 8,051 | 6,562 |
| 1990 | 548 | 3,275 | 0 | 15,856 | 6,940 | 0 | 26,071 | 0 | 256 | 8,160 | 8,347 |
| 1991 | 420 | 3,117 | 0 | 3,855 | 1,380 | 0 | 8,352 | 0 | 162 | 3,676 | 3,269 |
| 1992 | 485 | 5,553 | 0 | 9,220 | 4,001 | 0 | 18,774 | 0 | 217 | 5,177 | 2,188 |
| 1993 | 444 | 14,709 | 0 | 14,471 | 5,286 | 0 | 34,466 | 0 | 190 | 5,843 | 8,430 |
| 1994 | 492 | 10,343 | 0 | 14,913 | 6,792 | 0 | 32,048 | 0 | 132 | 4,482 | 5,427 |
| 1995 | 308 | 5,452 | 0 | 15,893 | 5,182 | 0 | 26,527 | 0 | 278 | 6,236 | 7,195 |
| 1996 | 360 | 12,930 | 0 | 17,069 | 4,893 | 0 | 34,892 | 0 | 277 | 6,151 | 5,119 |
| 1997 | 231 | 16,029 | 0 | 17,501 | 4,341 | 0 | 37,871 | 0 | 138 | 6,647 | 6,501 |
| 1998 | 0 | 11,562 | 0 | 18,204 | 5,359 | 0 | 35,125 | 0 | 106 | 3,748 | 2,493 |
| 1999 | 0 | 15,191 | 0 | 19,562 | 5,304 | 0 | 40,057 | 0 | 148 | 5,048 | 8,227 |
| 2000 | 0 | 15,490 | 0 | 21,525 | 4,958 | 0 | 41,973 | 0 | 110 | 7,464 | 9,761 |
| 2001 | 0 | 14,849 | 0 | 19,737 | 9,345 | 0 | 43,931 | 0 | 105 | 7,822 | 4,879 |
| 2002 | 0 | 18,841 | 0 | 19,719 | 6,875 | 0 | 45,435 | 0 | 93 | 7,758 | 11,619 |
| 2003 | 0 | 17,260 | 9 | 16,691 | 7,637 | 0 | 41,597 | 0 | 108 | 7,916 | 11,348 |
| 2004 | 0 | 20,951 | 135 | 21,551 | 7,999 | 500 | 51,136 | 0 | 72 | 11,754 | 9,737 |
| 2005 | 0 | 18,290 | 160 | 19,029 | 7,509 | 500 | 45,488 | 0 | 1,430 | 11,520 | 10,100 |
| 2006 | 0 | 16,573 | 208 | 18,443 | 7,581 | 500 | 43,305 | 0 | 830 | 11,546 | 4,097 |
| 2007 | 0 | 19,187 | 180 | 27,613 | 10,777 | 500 | 58,257 | 0 | 179 | 10,066 | 2,563 |
| 2008 | 243 | 21,436 | 52 | 19,384 | 13,240 | 500 | 54,612 | 0 | 238 | 11,424 | 2,206 |
| 2009 | 200 | 15,004 | 27 | 15,446 | 10,877 | 500 | 41,854 | 0 | 211 | 7,054 | 5,437 |
| 2010 | 756 | 12,221 | 147 | 11,663 | 12,258 | 0 | 36,289 | 0 | 288 | 4,089 | 12,829 |
| 2011 | 2,240 | 19,745 | 0 | 10,603 | 19,900 | 0 | 50,248 | 0 | 245 | 6,120 | 12,850 |
| 2012 | 2,320 | 19,745 | 0 | 10,603 | 20,200 | 0 | 50,548 | 0 | 245 | 7,500 | 12,850 |
| 2013 | 2,410 | 19,745 | 0 | 10,603 | 20,425 | 0 | 50,773 | 0 | 245 | 7,500 | 12,850 |
| 2014 | 2,500 | 19,745 | 0 | 11,603 | 20,425 | 0 | 51,773 | 0 | 10,045 | 6,520 | 12,850 |
| 2015 | 2,600 | 34,611 | 0 | 13,145 | 29,025 | 0 | 76,781 | 0 | 10,045 | 6,520 | 12,850 |
| 2016 | 2,700 | 34,611 | 0 | 13,145 | 29,025 | 0 | 76,781 | 0 | 10,045 | 6,520 | 12,850 |
| 2017 | 2,700 | 34,611 | 0 | 13,145 | 29,025 | 0 | 76,781 | 0 | 10,045 | 6,520 | 12,850 |
| 2018 | 2,700 | 34,611 | 0 | 13,145 | 29,025 | 0 | 76,781 | 0 | 10,045 | 6,520 | 12,850 |
| 2019 | 2,700 | 34,611 | 0 | 13,145 | 29,025 | 0 | 76,781 | 0 | 10,045 | 6,520 | 12,850 |
| 2020 | 2,700 | 34,611 | 0 | 13,145 | 29,025 | 0 | 76,781 | 0 | 10,045 | 6,520 | 12,850 |
| 2021 | 2,700 | 34,611 | 0 | 13,145 | 29,025 | 0 | 76,781 | 0 | 10,045 | 6,520 | 12,850 |
| 2022 | 2,700 | 34,611 | 0 | 13,145 | 29,025 | 0 | 76,781 | 0 | 10,045 | 6,520 | 12,850 |
| 2023 | 2,700 | 34,611 | 0 | 13,145 | 29,025 | 0 | 76,781 | 0 | 10,045 | 6,520 | 12,850 |
| 2024 | 2,700 | 34,611 | 0 | 13,145 | 29,025 | 0 | 76,781 | 0 | 10,045 | 6,520 | 12,850 |
| 2025 | 2,700 | 34,611 | 0 | 13,145 | 29,025 | 0 | 76,781 | 0 | 10,045 | 6,520 | 12,850 |
| 2026 | 2,700 | 34,611 | 0 | 13,145 | 29,025 | 0 | 76,781 | 0 | 10,045 | 6,520 | 12,850 |
| 2027 | 2,700 | 34,611 | 0 | 13,145 | 29,025 | 0 | 76,781 | 0 | 10,045 | 6,520 | 12,850 |
| 2028 | 2,700 | 34,611 | 0 | 13,145 | 29,025 | 0 | 76,781 | 0 | 10,045 | 6,520 | 12,850 |
| 2029 | 2,700 | 34,611 | 0 | 13,145 | 29,025 | 0 | 76,781 | 0 | 10,045 | 6,520 | 12,850 |
| 2030 | 2,700 | 34,611 | 0 | 13,145 | 29,025 | 0 | 76,781 | 0 | 10,045 | 6,520 | 12,850 |
| 2031 | 2,700 | 34,611 | 0 | 13,145 | 29,025 | 0 | 76,781 | 0 | 10,045 | 6,520 | 12,850 |
| 2032 | 2,700 | 34,611 | 0 | 13,145 | 29,025 | 0 | 76,781 | 0 | 10,045 | 6,520 | 12,850 |
| 2033 | 2,700 | 34,611 | 0 | 13,145 | 29,025 | 0 | 76,781 | 0 | 10,045 | 6,520 | 12,850 |
| 2034 | 2,700 | 34,611 | 0 | 13,145 | 29,025 | 0 | 76,781 | 0 | 10,045 | 6,520 | 12,850 |
| 2035 | 2,700 | 34,611 | 0 | 13,145 | 29,025 | 0 | 76,781 | 0 | 10,045 | 6,520 | 12,850 |
| TOTAL | 77,741 | 1,097,035 | 918 | 703,773 | 945,110 | 3,000 | 2,749,836 | 53,844 | 243,922 | 420,880 | 531,704 |

(a) For the period 1968 through 1987, deliveries are non-Project water pumped through an interim facility.

**TABLE B-5A. Annual Water Quantities Delivered from
Each Aqueduct Reach to Each Contractor**

(in acre-feet)

Sheet 2 of 18

| Calendar Year | SOUTH BAY AQUEDUCT (b) | | | | | CALIFORNIA AQUEDUCT | | | | | | |
|------------------|------------------------|---------|---------------|---------|---------|----------------------------|-----------|---------|----------|---------|--------|-----------|
| | (Continued) | | | | | NORTH SAN JOAQUIN DIVISION | | | | | | |
| | Reach 5 | | Reach 6 AC | Reach 7 | Reach 8 | Reach 9 | Total | Reach 1 | Reach 2A | | | OFWD (c) |
| | ACWD | AC | | | | | | KCWA | AC | KCWA | | |
| | | | (M&I) | (AG) | | | | | | | | |
| | [12] | [13] | [14] | [15] | [16] | [17] | [18] | [19] | [20] | [21] | [22] | [23] |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 8,906 | 0 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 12,645 | 0 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 20,911 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 1,127 | 0 | 15,014 | 34,026 | 0 | 0 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 14,864 | 0 | 34,538 | 54,913 | 0 | 0 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 12,882 | 0 | 39,101 | 56,763 | 0 | 0 | 0 | 0 | 0 |
| 1968 | 0 | 5 | 0 | 24,817 | 0 | 70,105 | 101,055 | 0 | 0 | 0 | 0 | 3,084 |
| 1969 | 0 | 160 | 0 | 813 | 0 | 62,264 | 69,712 | 0 | 0 | 0 | 0 | 3,016 |
| 1970 | 0 | 164 | 0 | 0 | 0 | 80,311 | 89,560 | 0 | 0 | 0 | 0 | 5,911 |
| 1971 | 0 | 160 | 0 | 5,961 | 0 | 87,606 | 98,584 | 0 | 0 | 0 | 0 | 7,212 |
| 1972 | 1,489 | 2,777 | 0 | 26,182 | 0 | 100,266 | 138,426 | 0 | 0 | 0 | 0 | 8,166 |
| 1973 | 0 | 229 | 0 | 2,521 | 0 | 88,582 | 94,078 | 0 | 0 | 0 | 0 | 3,214 |
| 1974 | 0 | 162 | 0 | 0 | 4 | 88,000 | 89,318 | 0 | 0 | 0 | 0 | 3,471 |
| 1975 | 0 | 120 | 714 | 393 | 593 | 88,000 | 93,604 | 0 | 0 | 0 | 0 | 3,576 |
| 1976 | 0 | 817 | 5,461 | 13,774 | 7,526 | 88,000 | 126,431 | 0 | 0 | 0 | 0 | 4,112 |
| 1977 | 0 | 524 | 5,206 | 11,284 | 7,556 | 76,220 | 107,704 | 0 | 0 | 0 | 0 | 1,472 |
| 1978 | 0 | 2,034 | 2,348 | 854 | 5,009 | 95,727 | 112,574 | 0 | 0 | 0 | 0 | 3,906 |
| 1979 | 0 | 3,937 | 5,341 | 3,430 | 7,444 | 91,991 | 122,190 | 0 | 0 | 0 | 0 | 6,149 |
| 1980 | 1,508 | 0 | 6,144 | 2,824 | 6,702 | 88,000 | 115,824 | 0 | 0 | 0 | 0 | 5,700 |
| 1981 | 5,752 | 1,157 | 7,262 | 7,595 | 8,570 | 88,000 | 129,507 | 0 | 0 | 0 | 0 | 4,300 |
| 1982 | 0 | 630 | 4,571 | 1,776 | 4,540 | 88,000 | 107,439 | 0 | 0 | 0 | 0 | 3,838 |
| 1983 | 0 | 50 | 111 | 0 | 3,157 | 86,733 | 94,656 | 0 | 0 | 0 | 0 | 3,822 |
| 1984 | 0 | 55 | 126 | 0 | 3,338 | 88,000 | 98,122 | 0 | 0 | 0 | 0 | 5,700 |
| 1985 | 0 | 63 | 7,537 | 11,203 | 7,813 | 88,000 | 122,088 | 0 | 0 | 0 | 0 | 5,433 |
| 1986 | 0 | 212 | 2,083 | 5,311 | 7,068 | 88,000 | 110,988 | 0 | 0 | 0 | 0 | 5,107 |
| 1987 | 0 | 285 | 12,993 | 15,488 | 9,902 | 88,000 | 136,796 | 0 | 0 | 0 | 0 | 5,625 |
| 1988 | 0 | 189 | 12,436 | 24,259 | 9,205 | 87,961 | 147,255 | 0 | 0 | 0 | 0 | 4,412 |
| 1989 | 0 | 418 | 10,974 | 17,340 | 8,702 | 90,000 | 142,269 | 0 | 0 | 0 | 0 | 6,091 |
| 1990 | 0 | 593 | 15,678 | 22,149 | 9,554 | 91,800 | 156,537 | 0 | 0 | 0 | 0 | 2,922 |
| 1991 | 0 | 359 | 1,945 | 9,155 | 3,493 | 28,200 | 50,259 | 0 | 0 | 0 | 0 | 141 |
| 1992 | 0 | 154 | 6,933 | 12,621 | 6,532 | 42,839 | 76,661 | 0 | 0 | 0 | 0 | 2,239 |
| 1993 | 1,650 | 5,964 | 13,208 | 1,792 | 6,829 | 62,065 | 105,971 | 0 | 0 | 0 | 0 | 2,858 |
| 1994 | 0 | 822 | 9,679 | 3,379 | 19,532 | 57,115 | 100,568 | 0 | 0 | 0 | 0 | 3,071 |
| 1995 | 0 | 955 | 15,427 | 21 | 17,772 | 28,756 | 76,640 | 0 | 0 | 0 | 0 | 5,169 |
| 1996 | 0 | 388 | 6,968 | 1,871 | 11,591 | 44,850 | 77,215 | 0 | 0 | 0 | 0 | 4,904 |
| 1997 | 1,323 | 1,582 | 12,654 | 1,876 | 10,864 | 60,601 | 102,186 | 0 | 0 | 0 | 0 | 5,238 |
| 1998 | 0 | 1,277 | 8,347 | 3,817 | 11,478 | 39,610 | 70,876 | 0 | 0 | 0 | 0 | 4,401 |
| 1999 | 0 | 1,444 | 13,133 | 5,326 | 16,226 | 52,945 | 102,497 | 0 | 0 | 0 | 0 | 4,871 |
| 2000 | 0 | 946 | 16,396 | 4,498 | 18,100 | 78,258 | 135,533 | 0 | 0 | 0 | 0 | 4,508 |
| 2001 | 0 | 3,010 | 13,593 | 0 | 18,004 | 47,922 | 95,335 | 0 | 0 | 638 | 0 | 3,592 |
| 2002 | 0 | 2,446 | 17,058 | 5,112 | 20,616 | 58,875 | 123,577 | 0 | 0 | 773 | 0 | 4,885 |
| 2003 | 0 | 2,887 | 16,684 | 5,037 | 12,753 | 75,981 | 132,714 | 0 | 7 | 917 | 0 | 4,266 |
| 2004 | 0 | 3,763 | 21,260 | 4,968 | 14,916 | 59,458 | 125,928 | 0 | 38 | 786 | 0 | 4,629 |
| 2005 | 0 | 1,826 | 16,597 | 4,139 | 10,160 | 52,364 | 108,136 | 0 | 299 | 1,046 | 0 | 4,194 |
| 2006 | 0 | 2,123 | 19,870 | 2,708 | 12,924 | 64,174 | 118,272 | 0 | 321 | 1,103 | 0 | 4,242 |
| 2007 | 0 | 3,107 | 23,205 | 8,255 | 15,107 | 71,690 | 134,172 | 0 | 320 | 1,031 | 0 | 3,567 |
| 2008 | 0 | 1,899 | 25,363 | 4,421 | 18,481 | 52,530 | 116,562 | 8,885 | 56 | 1,744 | 0 | 1,985 |
| 2009 | 0 | 1,987 | 16,398 | 2,551 | 16,945 | 66,364 | 116,947 | 0 | 0 | 1,169 | 0 | 1,993 |
| 2010 | 0 | 5,916 | 21,138 | 1,600 | 11,357 | 48,400 | 105,617 | 0 | 0 | 2,282 | 0 | 2,463 |
| 2011 | 0 | 3,245 | 14,898 | 5,728 | 7,456 | 58,500 | 109,042 | 0 | 0 | 5,900 | 600 | 5,700 |
| 2012 | 0 | 3,245 | 14,098 | 5,728 | 9,664 | 58,500 | 111,830 | 0 | 0 | 5,900 | 600 | 5,700 |
| 2013 | 0 | 3,245 | 14,298 | 5,728 | 9,664 | 58,500 | 112,030 | 0 | 0 | 5,900 | 600 | 5,700 |
| 2014 | 0 | 3,245 | 6,238 | 5,728 | 9,664 | 58,500 | 112,790 | 0 | 0 | 5,900 | 600 | 5,700 |
| 2015 | 0 | 3,245 | 29,259 | 5,728 | 21,406 | 90,000 | 179,053 | 0 | 0 | 5,900 | 600 | 5,700 |
| 2016 | 0 | 3,245 | 29,259 | 5,728 | 21,406 | 90,000 | 179,053 | 0 | 0 | 5,900 | 600 | 5,700 |
| 2017 | 0 | 3,245 | 29,259 | 5,728 | 21,406 | 90,000 | 179,053 | 0 | 0 | 5,900 | 600 | 5,700 |
| 2018 | 0 | 3,245 | 29,259 | 5,728 | 21,406 | 90,000 | 179,053 | 0 | 0 | 5,900 | 600 | 5,700 |
| 2019 | 0 | 3,245 | 29,259 | 5,728 | 21,406 | 90,000 | 179,053 | 0 | 0 | 5,900 | 600 | 5,700 |
| 2020 | 0 | 3,245 | 29,259 | 5,728 | 21,406 | 90,000 | 179,053 | 0 | 0 | 5,900 | 600 | 5,700 |
| 2021 | 0 | 3,245 | 29,259 | 5,728 | 21,406 | 90,000 | 179,053 | 0 | 0 | 5,900 | 600 | 5,700 |
| 2022 | 0 | 3,245 | 29,259 | 5,728 | 21,406 | 90,000 | 179,053 | 0 | 0 | 5,900 | 600 | 5,700 |
| 2023 | 0 | 3,245 | 29,259 | 5,728 | 21,406 | 90,000 | 179,053 | 0 | 0 | 5,900 | 600 | 5,700 |
| 2024 | 0 | 3,245 | 29,259 | 5,728 | 21,406 | 90,000 | 179,053 | 0 | 0 | 5,900 | 600 | 5,700 |
| 2025 | 0 | 3,245 | 29,259 | 5,728 | 21,406 | 90,000 | 179,053 | 0 | 0 | 5,900 | 600 | 5,700 |
| 2026 | 0 | 3,245 | 29,259 | 5,728 | 21,406 | 90,000 | 179,053 | 0 | 0 | 5,900 | 600 | 5,700 |
| 2027 | 0 | 3,245 | 29,259 | 5,728 | 21,406 | 90,000 | 179,053 | 0 | 0 | 5,900 | 600 | 5,700 |
| 2028 | 0 | 3,245 | 29,259 | 5,728 | 21,406 | 90,000 | 179,053 | 0 | 0 | 5,900 | 600 | 5,700 |
| 2029 | 0 | 3,245 | 29,259 | 5,728 | 21,406 | 90,000 | 179,053 | 0 | 0 | 5,900 | 600 | 5,700 |
| 2030 | 0 | 3,245 | 29,259 | 5,728 | 21,406 | 90,000 | 179,053 | 0 | 0 | 5,900 | 600 | 5,700 |
| 2031 | 0 | 3,245 | 29,259 | 5,728 | 21,406 | 90,000 | 179,053 | 0 | 0 | 5,900 | 600 | 5,700 |
| 2032 | 0 | 3,245 | 29,259 | 5,728 | 21,406 | 90,000 | 179,053 | 0 | 0 | 5,900 | 600 | 5,700 |
| 2033 | 0 | 3,245 | 29,259 | 5,728 | 21,406 | 90,000 | 179,053 | 0 | 0 | 5,900 | 600 | 5,700 |
| 2034 | 0 | 3,245 | 29,259 | 5,728 | 21,406 | 90,000 | 179,053 | 0 | 0 | 5,900 | 600 | 5,700 |
| 2035 | 0 | 3,245 | 29,259 | 5,728 | 21,406 | 90,000 | 179,053 | 0 | 0 | 5,900 | 600 | 5,700 |
| TOTAL | 11,722 | 138,721 | 1,058,812 | 453,194 | 866,337 | 5,295,216 | 9,074,352 | 8,885 | 1,041 | 158,989 | 15,000 | 321,955 |

(b) For the period June 1962 through November 1967, deliveries were supplied by non-Project water.

(c) Includes 425 AF of 1988 advance allocation and 141 AF of 1992 advance allocation.

**TABLE B-5A. Annual Water Quantities Delivered from
Each Aqueduct Reach to Each Contractor**

(in acre-feet)

Sheet 3 of 18

| Calendar Year | CALIFORNIA AQUEDUCT (continued) | | | | | | | | | |
|------------------|---------------------------------|--------|-------------------|-------|------|---------|---------|----------|--------|--------|
| | NSJD cont. | | SAN LUIS DIVISION | | | | | | | |
| | Reach 2A | | Reach 3 | | | | | | | |
| | SCVWD | TLBWSD | AVEK | CLWA | DRWD | KCWA | | MWDSC | SCVWD | TLBWSD |
| | | | | | | (AG) | (M&I) | | | |
| | [24] | [25] | [26] | [27] | [28] | [29] | [30] | [31] | [32] | [33] |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1968 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1969 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1970 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1972 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1973 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1974 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1975 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1976 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1977 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1978 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1979 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1980 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1981 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1982 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1983 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1984 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1985 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1986 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1987 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1988 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1989 | 0 | 300 | 0 | 0 | 602 | 0 | 0 | 0 | 0 | 0 |
| 1990 | 200 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1991 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1992 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1993 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1994 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1995 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1996 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1997 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11,100 | 0 | 0 |
| 1998 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | (11,100) | 0 | 0 |
| 1999 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2000 | 0 | 0 | 0 | 0 | 0 | 68,960 | 3,320 | 0 | 0 | 0 |
| 2001 | 0 | 0 | 0 | 0 | 0 | 131,452 | 8,790 | 0 | 30,000 | 0 |
| 2002 | 0 | 0 | 0 | 0 | 0 | 47,024 | 21,000 | 0 | 0 | 0 |
| 2003 | 0 | 0 | 0 | 0 | 0 | 151,044 | 0 | 29,596 | 0 | 0 |
| 2004 | 0 | 0 | 0 | 0 | 0 | 35,213 | 0 | 0 | 0 | 0 |
| 2005 | 0 | 0 | 0 | 0 | 0 | 109,712 | 0 | 50,000 | 8,804 | 277 |
| 2006 | 0 | 0 | 0 | 0 | 0 | 19,575 | 0 | 0 | 0 | 0 |
| 2007 | 0 | 0 | 0 | 0 | 0 | 116,272 | 71,567 | 0 | 0 | 0 |
| 2008 | 0 | 0 | 5,873 | 0 | 0 | 94,562 | 0 | 0 | 0 | 0 |
| 2009 | 0 | 0 | 0 | 3,300 | 0 | 157,901 | 0 | 52,933 | 8,151 | 0 |
| 2010 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2011 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2012 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2013 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2014 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2015 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2016 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2017 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2018 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2019 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2020 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2021 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2022 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2023 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2024 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2025 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2026 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2027 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2028 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2029 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2030 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2031 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2032 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2033 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2034 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2035 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 200 | 300 | 5,873 | 3,300 | 602 | 931,715 | 104,677 | 132,529 | 46,955 | 277 |

**TABLE B-5A. Annual Water Quantities Delivered from
Each Aqueduct Reach to Each Contractor**

(in acre-feet)

Sheet 4 of 18

| Calendar Year | CALIFORNIA AQUEDUCT (continued) | | | | | | | | | | |
|------------------|---------------------------------|---------|--------|-------|--------|---------|--------|-------|---------|--------|--------|
| | SAN LUIS DIVISION (continued) | | | | | | | | | | |
| | Reach 3A | Reach 4 | | | | Reach 5 | | | | | |
| | KCWA | DRWD | KCWA | | TLBWSD | CLWA | DRWD | EWSID | KCWA | | MWDSC |
| | (AG) | | (AG) | (M&I) | | | | | (AG) | (M&I) | |
| | [34] | [35] | [36] | [37] | [38] | [39] | [40] | [41] | [42] | [43] | [44] |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1968 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1969 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1970 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1972 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1973 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1974 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1975 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1976 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1977 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1978 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1979 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1980 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1981 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1982 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1983 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1984 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1985 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1986 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1987 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1988 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1989 | 0 | 1,898 | 12,647 | 0 | 0 | 0 | 0 | 0 | 18,831 | 0 | 0 |
| 1990 | 0 | 0 | 0 | 0 | 1,500 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1991 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1992 | 0 | 0 | 0 | 0 | 0 | 0 | 10,823 | 0 | 0 | 0 | 0 |
| 1993 | 0 | 0 | 0 | 0 | 0 | 5,095 | 27,200 | 0 | 28,200 | 0 | 0 |
| 1994 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1995 | 0 | 14,446 | 3,500 | 0 | 0 | 0 | 0 | 0 | 21,776 | 0 | 0 |
| 1996 | 0 | 0 | 4,162 | 1,125 | 0 | 0 | 0 | 0 | 81,507 | 1,125 | 0 |
| 1997 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 154,940 | 9,080 | 0 |
| 1998 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1999 | 0 | 0 | 0 | 0 | 1,300 | 0 | 0 | 0 | 0 | 0 | 21,500 |
| 2000 | 0 | 0 | 878 | 1,517 | 0 | 0 | 0 | 0 | 57,647 | 8,130 | 0 |
| 2001 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 0 | 0 | 1,351 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2004 | 9,664 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2005 | 0 | 0 | 7,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2006 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2007 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2008 | 0 | 0 | 10,721 | 0 | 907 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2009 | 0 | 0 | 0 | 0 | 500 | 0 | 0 | 870 | 0 | 0 | 0 |
| 2010 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2011 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2012 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2013 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2014 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2015 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2016 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2017 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2018 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2019 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2020 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2021 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2022 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2023 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2024 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2025 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2026 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2027 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2028 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2029 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2030 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2031 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2032 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2033 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2034 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2035 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 9,664 | 16,344 | 40,259 | 2,642 | 4,207 | 5,095 | 38,023 | 870 | 362,901 | 18,335 | 21,500 |

**TABLE B-5A. Annual Water Quantities Delivered from
Each Aqueduct Reach to Each Contractor**

(in acre-feet)

Sheet 5 of 18

| Calendar Year | CALIFORNIA AQUEDUCT (continued) | | | | | | | | | | |
|------------------|---------------------------------|--------|---------|--------|---------|----------------------------|--------|---------|-------|---------|--------|
| | SAN LUIS DIVISION (continued) | | | | | SOUTH SAN JOAQUIN DIVISION | | | | | |
| | Reach 5 | | Reach 6 | | | | | Reach 7 | | | |
| | OFWD | TLBWSD | KCWA | | CK | MWDSC | TLBWSD | CLWA | DRWD | KCWA | |
| | | | (AG) | (M&I) | | | | | | (AG) | (M&I) |
| | [45] | [46] | [47] | [48] | [49] | [50] | [51] | [52] | [53] | [54] | [55] |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1968 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1969 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1970 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1972 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1973 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1974 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1975 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1976 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1977 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1978 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1979 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1980 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1981 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1982 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1983 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1984 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1985 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1986 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1987 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1988 | 0 | 1,550 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1989 | 0 | 0 | 8,260 | 0 | 0 | 0 | 0 | 0 | 0 | 5,262 | 0 |
| 1990 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1991 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1992 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1993 | 2,000 | 1,624 | 31,200 | 0 | 0 | 0 | 0 | 0 | 0 | 10,043 | 18,157 |
| 1994 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,100 | 0 | 0 | 0 |
| 1995 | 0 | 0 | 3,932 | 0 | 0 | 0 | 0 | 0 | 0 | 20,595 | 10,875 |
| 1996 | 0 | 4,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 69,704 | 3,424 |
| 1997 | 0 | 3,500 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 32,463 | 27,079 |
| 1998 | 0 | 0 | 33,340 | 20,400 | 0 | 0 | 3,000 | 0 | 200 | 62,081 | 3,998 |
| 1999 | 0 | 8,000 | 33,776 | 0 | 0 | 11,000 | 23,000 | 0 | 0 | 19,500 | 7,923 |
| 2000 | 0 | 0 | 35,847 | 1,457 | 0 | 0 | 3,000 | 1,200 | 0 | 45,137 | 0 |
| 2001 | 0 | 2,457 | 0 | 0 | 0 | 0 | 600 | 0 | 0 | 0 | 0 |
| 2002 | 0 | 3,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 0 | 3,900 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2004 | 0 | 3,850 | 0 | 0 | 3,250 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2005 | 0 | 1,000 | 0 | 0 | 6,954 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2006 | 0 | 3,000 | 0 | 0 | 2,659 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2007 | 0 | 3,600 | 0 | 0 | 3,119 | 0 | 0 | 0 | 0 | 16,214 | 0 |
| 2008 | 0 | 448 | 0 | 0 | 2,159 | 0 | 0 | 0 | 400 | 1,998 | 0 |
| 2009 | 0 | 990 | 0 | 0 | 1,779 | 0 | 2,100 | 0 | 1,400 | 0 | 0 |
| 2010 | 0 | 0 | 0 | 0 | 1,817 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2011 | 0 | 0 | 0 | 0 | 5,200 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2012 | 0 | 0 | 0 | 0 | 5,200 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2013 | 0 | 0 | 0 | 0 | 5,200 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2014 | 0 | 0 | 0 | 0 | 5,200 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2015 | 0 | 0 | 0 | 0 | 5,200 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2016 | 0 | 0 | 0 | 0 | 5,200 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2017 | 0 | 0 | 0 | 0 | 5,200 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2018 | 0 | 0 | 0 | 0 | 5,200 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2019 | 0 | 0 | 0 | 0 | 5,200 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2020 | 0 | 0 | 0 | 0 | 5,200 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2021 | 0 | 0 | 0 | 0 | 5,200 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2022 | 0 | 0 | 0 | 0 | 5,200 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2023 | 0 | 0 | 0 | 0 | 5,200 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2024 | 0 | 0 | 0 | 0 | 5,200 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2025 | 0 | 0 | 0 | 0 | 5,200 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2026 | 0 | 0 | 0 | 0 | 5,200 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2027 | 0 | 0 | 0 | 0 | 5,200 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2028 | 0 | 0 | 0 | 0 | 5,200 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2029 | 0 | 0 | 0 | 0 | 5,200 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2030 | 0 | 0 | 0 | 0 | 5,200 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2031 | 0 | 0 | 0 | 0 | 5,200 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2032 | 0 | 0 | 0 | 0 | 5,200 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2033 | 0 | 0 | 0 | 0 | 5,200 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2034 | 0 | 0 | 0 | 0 | 5,200 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2035 | 0 | 0 | 0 | 0 | 5,200 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 2,000 | 40,919 | 146,355 | 21,857 | 151,737 | 11,000 | 31,700 | 3,300 | 2,000 | 282,997 | 71,456 |

**TABLE B-5A. Annual Water Quantities Delivered from
Each Aqueduct Reach to Each Contractor**

(in acre-feet)

Sheet 6 of 18

| Calendar Year | CALIFORNIA AQUEDUCT (continued) | | | | | | | | | |
|------------------|--|--------|--------|----------|---------|--------|-------|---------|-----------|-----------|
| | SOUTH SAN JOAQUIN DIVISION (continued) | | | | | | | | | |
| | Reach 7 | | | Reach 8C | | | | | | Reach 8D |
| | CK | MWDSC | TLBWSD | DRWD | EWSID | KCWA | | CK | TLBWSD | DRWD |
| | | | | | | (AG) | (M&I) | | | |
| | [56] | [57] | [58] | [59] | [60] | [61] | [62] | [63] | [64] | [65] |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1968 | 0 | 0 | 0 | 0 | 1,978 | 0 | 0 | 900 | 25,100 | 26,360 |
| 1969 | 0 | 0 | 0 | 0 | 56 | 0 | 0 | 100 | 7,081 | 31,375 |
| 1970 | 0 | 0 | 0 | 0 | 3,942 | 0 | 0 | 0 | 0 | 40,407 |
| 1971 | 0 | 0 | 0 | 0 | 5,990 | 0 | 0 | 3,700 | 80,906 | 41,053 |
| 1972 | 0 | 0 | 0 | 0 | 5,795 | 0 | 0 | 1,400 | 144,843 | 42,443 |
| 1973 | 0 | 0 | 0 | 0 | 3,000 | 0 | 0 | 1,500 | 26,317 | 22,057 |
| 1974 | 0 | 0 | 0 | 0 | 3,000 | 0 | 0 | 1,500 | 32,603 | 33,390 |
| 1975 | 0 | 0 | 0 | 0 | 3,000 | 0 | 0 | 1,600 | 41,536 | 40,555 |
| 1976 | 0 | 0 | 0 | 0 | 3,000 | 0 | 0 | 1,600 | 26,595 | 41,421 |
| 1977 | 0 | 0 | 0 | 0 | 738 | 0 | 0 | 1,530 | 12,984 | 11,153 |
| 1978 | 0 | 0 | 0 | 0 | 454 | 0 | 0 | 2,070 | 3,934 | 51,747 |
| 1979 | 0 | 0 | 0 | 0 | 1,739 | 0 | 0 | 2,000 | 74,758 | 38,544 |
| 1980 | 0 | 0 | 0 | 0 | 894 | 0 | 0 | 2,200 | 35,140 | 41,000 |
| 1981 | 0 | 0 | 0 | 0 | 5,859 | 0 | 0 | 2,300 | 50,888 | 41,000 |
| 1982 | 0 | 0 | 0 | 0 | 361 | 0 | 0 | 1,536 | 4,405 | 41,000 |
| 1983 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3,550 | 1,001 | 42,900 |
| 1984 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3,100 | 3,677 | 45,100 |
| 1985 | 0 | 0 | 0 | 0 | 5,197 | 0 | 0 | 3,400 | 68,638 | 46,251 |
| 1986 | 0 | 0 | 0 | 0 | 1,170 | 0 | 0 | 3,700 | 40,017 | 50,249 |
| 1987 | 0 | 0 | 0 | 0 | 2,525 | 0 | 0 | 4,000 | 30,359 | 46,288 |
| 1988 | 0 | 0 | 0 | 0 | 3,475 | 0 | 0 | 4,000 | 46,281 | 47,994 |
| 1989 | 0 | 0 | 0 | 2,391 | 3,000 | 0 | 0 | 4,000 | 63,703 | 52,158 |
| 1990 | 0 | 0 | 0 | 0 | 1,279 | 0 | 0 | 2,000 | 23,504 | 36,296 |
| 1991 | 0 | 0 | 0 | 0 | 221 | 0 | 0 | 0 | 1,697 | 927 |
| 1992 | 0 | 0 | 0 | 280 | 1,354 | 0 | 0 | 1,806 | 15,982 | 12,667 |
| 1993 | 0 | 0 | 0 | 0 | 2,741 | 0 | 0 | 4,000 | 57,112 | 23,221 |
| 1994 | 0 | 0 | 0 | 0 | 1,666 | 0 | 0 | 2,116 | 21,510 | 28,793 |
| 1995 | 0 | 0 | 0 | 0 | 1,631 | 10,527 | 989 | 4,000 | 40,934 | 45,240 |
| 1996 | 0 | 0 | 0 | 95 | 1,868 | 1,500 | 0 | 4,000 | 84,130 | 52,722 |
| 1997 | 0 | 0 | 0 | 0 | 0 | 1,500 | 0 | 0 | 9,467 | 57,496 |
| 1998 | 0 | 0 | 0 | 90 | 542 | 1,000 | 0 | 15 | 8,956 | 49,435 |
| 1999 | 0 | 500 | 4,470 | 86 | 3,176 | 400 | 0 | 4,000 | 90,334 | 58,290 |
| 2000 | 0 | 20,000 | 20,500 | 166 | 1,799 | 400 | 0 | 3,600 | 63,842 | 57,920 |
| 2001 | 0 | 0 | 0 | 14 | 1,360 | 0 | 0 | 1,560 | 23,300 | 40,155 |
| 2002 | 0 | 0 | 12,067 | 0 | 1,405 | 0 | 0 | 2,854 | 34,009 | 48,179 |
| 2003 | 0 | 0 | 15,103 | 0 | 1,436 | 0 | 0 | 3,692 | 25,317 | 45,732 |
| 2004 | 0 | 0 | 0 | 0 | 3,562 | 0 | 0 | 5,803 | 30,546 | 45,823 |
| 2005 | 6,904 | 0 | 4,000 | 0 | 3,834 | 0 | 0 | 4,057 | 42,450 | 58,627 |
| 2006 | 2,500 | 0 | 6,000 | 0 | 3,282 | 0 | 0 | 1,105 | 34,367 | 61,410 |
| 2007 | 0 | 0 | 2,545 | 0 | 2,084 | 0 | 0 | 657 | 31,305 | 39,974 |
| 2008 | 1,330 | 0 | 1,500 | 0 | 947 | 0 | 0 | 240 | 14,146 | 18,974 |
| 2009 | 0 | 0 | 600 | 0 | 164 | 0 | 0 | 1,612 | 13,522 | 12,037 |
| 2010 | 0 | 0 | 0 | 0 | 1,050 | 0 | 0 | 1,793 | 15,184 | 27,367 |
| 2011 | 0 | 0 | 0 | 0 | 3,000 | 0 | 0 | 3,800 | 35,569 | 50,343 |
| 2012 | 0 | 0 | 0 | 0 | 3,000 | 0 | 0 | 3,800 | 35,569 | 50,343 |
| 2013 | 0 | 0 | 0 | 0 | 3,000 | 0 | 0 | 3,800 | 35,569 | 50,343 |
| 2014 | 0 | 0 | 0 | 0 | 3,000 | 0 | 0 | 3,800 | 35,569 | 50,343 |
| 2015 | 0 | 0 | 0 | 0 | 3,000 | 0 | 0 | 3,800 | 35,569 | 47,343 |
| 2016 | 0 | 0 | 0 | 0 | 3,000 | 0 | 0 | 3,800 | 35,569 | 47,343 |
| 2017 | 0 | 0 | 0 | 0 | 3,000 | 0 | 0 | 3,800 | 35,569 | 47,343 |
| 2018 | 0 | 0 | 0 | 0 | 3,000 | 0 | 0 | 3,800 | 35,569 | 47,343 |
| 2019 | 0 | 0 | 0 | 0 | 3,000 | 0 | 0 | 3,800 | 35,569 | 47,343 |
| 2020 | 0 | 0 | 0 | 0 | 3,000 | 0 | 0 | 3,800 | 35,569 | 43,343 |
| 2021 | 0 | 0 | 0 | 0 | 3,000 | 0 | 0 | 3,800 | 35,569 | 43,343 |
| 2022 | 0 | 0 | 0 | 0 | 3,000 | 0 | 0 | 3,800 | 35,569 | 43,343 |
| 2023 | 0 | 0 | 0 | 0 | 3,000 | 0 | 0 | 3,800 | 35,569 | 43,343 |
| 2024 | 0 | 0 | 0 | 0 | 3,000 | 0 | 0 | 3,800 | 35,569 | 43,343 |
| 2025 | 0 | 0 | 0 | 0 | 3,000 | 0 | 0 | 3,800 | 35,569 | 43,343 |
| 2026 | 0 | 0 | 0 | 0 | 3,000 | 0 | 0 | 3,800 | 35,569 | 43,343 |
| 2027 | 0 | 0 | 0 | 0 | 3,000 | 0 | 0 | 3,800 | 35,569 | 43,343 |
| 2028 | 0 | 0 | 0 | 0 | 3,000 | 0 | 0 | 3,800 | 35,569 | 43,343 |
| 2029 | 0 | 0 | 0 | 0 | 3,000 | 0 | 0 | 3,800 | 35,569 | 43,343 |
| 2030 | 0 | 0 | 0 | 0 | 3,000 | 0 | 0 | 3,800 | 35,569 | 43,343 |
| 2031 | 0 | 0 | 0 | 0 | 3,000 | 0 | 0 | 3,800 | 35,569 | 43,343 |
| 2032 | 0 | 0 | 0 | 0 | 3,000 | 0 | 0 | 3,800 | 35,569 | 43,343 |
| 2033 | 0 | 0 | 0 | 0 | 3,000 | 0 | 0 | 3,800 | 35,569 | 43,343 |
| 2034 | 0 | 0 | 0 | 0 | 3,000 | 0 | 0 | 3,800 | 35,569 | 43,343 |
| 2035 | 0 | 0 | 0 | 0 | 3,000 | 0 | 0 | 3,800 | 35,569 | 43,343 |
| TOTAL | 10,734 | 20,500 | 66,785 | 3,122 | 165,574 | 15,327 | 989 | 193,596 | 2,391,605 | 2,827,305 |

**TABLE B-5A. Annual Water Quantities Delivered from
Each Aqueduct Reach to Each Contractor**

(in acre-feet)

Sheet 7 of 18

| Calendar Year | CALIFORNIA AQUEDUCT (continued) | | | | | | | | |
|------------------|--|-------|-------|------|-----------|---------|-----------|--------|--------|
| | SOUTH SAN JOAQUIN DIVISION (continued) | | | | | | | | |
| | Reach 8D | | | | | Reach 9 | | | |
| | KCWA | | CK | SLOC | TLBWSD | DRWD | KCWA | | TLBWSD |
| | (M&I) | (AG) | | | | | (AG) | (M&I) | |
| | [66] | [67] | [68] | [69] | [70] | [71] | [72] | [73] | [74] |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1968 | 0 | 0 | 0 | 0 | 0 | 0 | 30,951 | 0 | 0 |
| 1969 | 0 | 0 | 0 | 0 | 0 | 0 | 24,489 | 0 | 0 |
| 1970 | 0 | 0 | 0 | 0 | 3,408 | 0 | 46,114 | 0 | 1,855 |
| 1971 | 0 | 0 | 0 | 0 | 41,579 | 0 | 58,356 | 0 | 0 |
| 1972 | 0 | 0 | 0 | 0 | 113,550 | 0 | 75,464 | 0 | 0 |
| 1973 | 1,500 | 0 | 0 | 0 | 24,147 | 0 | 54,583 | 0 | 0 |
| 1974 | 0 | 0 | 0 | 0 | 39,686 | 0 | 63,814 | 0 | 0 |
| 1975 | 0 | 0 | 0 | 0 | 44,722 | 0 | 50,021 | 0 | 0 |
| 1976 | 0 | 0 | 0 | 0 | 32,216 | 0 | 53,465 | 0 | 0 |
| 1977 | 0 | 0 | 0 | 0 | 5,097 | 0 | 24,668 | 0 | 0 |
| 1978 | 0 | 0 | 0 | 0 | 8,119 | 0 | 72,231 | 0 | 0 |
| 1979 | 0 | 0 | 0 | 0 | 80,363 | 0 | 74,524 | 0 | 0 |
| 1980 | 0 | 0 | 0 | 0 | 40,304 | 0 | 79,946 | 0 | 0 |
| 1981 | 0 | 0 | 0 | 0 | 32,550 | 0 | 76,508 | 0 | 0 |
| 1982 | 0 | 0 | 214 | 0 | 14,146 | 0 | 76,877 | 0 | 0 |
| 1983 | 0 | 0 | 0 | 0 | 5 | 0 | 84,573 | 2,217 | 0 |
| 1984 | 0 | 0 | 0 | 0 | 2,066 | 0 | 85,732 | 4,100 | 0 |
| 1985 | 0 | 0 | 0 | 0 | 41,153 | 0 | 67,696 | 0 | 0 |
| 1986 | 0 | 0 | 0 | 0 | 39,338 | 0 | 79,943 | 0 | 0 |
| 1987 | 0 | 0 | 0 | 0 | 62,725 | 0 | 97,732 | 0 | 0 |
| 1988 | 0 | 0 | 0 | 0 | 48,035 | 0 | 83,858 | 1,100 | 0 |
| 1989 | 0 | 0 | 0 | 0 | 63,947 | 0 | 91,134 | 0 | 0 |
| 1990 | 161 | 0 | 0 | 0 | 32,066 | 0 | 83,108 | 0 | 0 |
| 1991 | 0 | 0 | 0 | 0 | 483 | 0 | 601 | 13,683 | 0 |
| 1992 | 0 | 0 | 0 | 0 | 30,746 | 0 | 40,183 | 28 | 0 |
| 1993 | 0 | 0 | 0 | 0 | 65,732 | 197 | 53,597 | 5,945 | 0 |
| 1994 | 1,726 | 0 | 0 | 0 | 40,852 | 0 | 44,994 | 0 | 0 |
| 1995 | 27,270 | 2,959 | 0 | 0 | 57,435 | 0 | 64,076 | 0 | 0 |
| 1996 | 1,455 | 0 | 0 | 100 | 148,745 | 0 | 89,291 | 2,236 | 0 |
| 1997 | 0 | 0 | 0 | 100 | 9,402 | 4,900 | 72,013 | 0 | 0 |
| 1998 | 20,000 | 0 | 0 | 0 | 8,721 | 0 | 57,530 | 0 | 0 |
| 1999 | 9,000 | 0 | 0 | 0 | 162,631 | 0 | 72,734 | 0 | 0 |
| 2000 | 0 | 0 | 0 | 0 | 113,952 | 0 | 71,562 | 2,000 | 0 |
| 2001 | 6,089 | 0 | 0 | 0 | 58,369 | 0 | 54,198 | 0 | 0 |
| 2002 | 7,522 | 0 | 0 | 0 | 47,426 | 0 | 60,957 | 0 | 0 |
| 2003 | 8,350 | 0 | 0 | 0 | 61,521 | 0 | 54,724 | 0 | 0 |
| 2004 | 4,979 | 0 | 0 | 0 | 55,625 | 0 | 54,330 | 0 | 0 |
| 2005 | 0 | 0 | 1,891 | 0 | 92,552 | 0 | 53,206 | 0 | 0 |
| 2006 | 0 | 0 | 3,266 | 0 | 64,840 | 0 | 56,909 | 0 | 0 |
| 2007 | 7,740 | 0 | 1,921 | 0 | 49,633 | 0 | 66,018 | 0 | 0 |
| 2008 | 21,242 | 0 | 107 | 0 | 16,903 | 0 | 63,315 | 0 | 0 |
| 2009 | 19,684 | 0 | 0 | 0 | 16,794 | 5,500 | 64,007 | 0 | 2,330 |
| 2010 | 0 | 0 | 0 | 0 | 18,638 | 0 | 46,916 | 0 | 0 |
| 2011 | 0 | 0 | 0 | 0 | 53,353 | 0 | 65,316 | 0 | 0 |
| 2012 | 0 | 0 | 0 | 0 | 53,353 | 0 | 65,316 | 0 | 0 |
| 2013 | 0 | 0 | 0 | 0 | 53,353 | 0 | 65,316 | 0 | 0 |
| 2014 | 0 | 0 | 0 | 0 | 53,353 | 0 | 65,316 | 0 | 0 |
| 2015 | 0 | 0 | 0 | 0 | 53,353 | 0 | 65,316 | 0 | 0 |
| 2016 | 0 | 0 | 0 | 0 | 53,353 | 0 | 65,316 | 0 | 0 |
| 2017 | 0 | 0 | 0 | 0 | 53,353 | 0 | 65,316 | 0 | 0 |
| 2018 | 0 | 0 | 0 | 0 | 53,353 | 0 | 65,316 | 0 | 0 |
| 2019 | 0 | 0 | 0 | 0 | 53,353 | 0 | 65,316 | 0 | 0 |
| 2020 | 0 | 0 | 0 | 0 | 53,353 | 0 | 65,316 | 0 | 0 |
| 2021 | 0 | 0 | 0 | 0 | 53,353 | 0 | 65,316 | 0 | 0 |
| 2022 | 0 | 0 | 0 | 0 | 53,353 | 0 | 65,316 | 0 | 0 |
| 2023 | 0 | 0 | 0 | 0 | 53,353 | 0 | 65,316 | 0 | 0 |
| 2024 | 0 | 0 | 0 | 0 | 53,353 | 0 | 65,316 | 0 | 0 |
| 2025 | 0 | 0 | 0 | 0 | 53,353 | 0 | 65,316 | 0 | 0 |
| 2026 | 0 | 0 | 0 | 0 | 53,353 | 0 | 65,316 | 0 | 0 |
| 2027 | 0 | 0 | 0 | 0 | 53,353 | 0 | 65,316 | 0 | 0 |
| 2028 | 0 | 0 | 0 | 0 | 53,353 | 0 | 65,316 | 0 | 0 |
| 2029 | 0 | 0 | 0 | 0 | 53,353 | 0 | 65,316 | 0 | 0 |
| 2030 | 0 | 0 | 0 | 0 | 53,353 | 0 | 65,316 | 0 | 0 |
| 2031 | 0 | 0 | 0 | 0 | 53,353 | 0 | 65,316 | 0 | 0 |
| 2032 | 0 | 0 | 0 | 0 | 53,353 | 0 | 65,316 | 0 | 0 |
| 2033 | 0 | 0 | 0 | 0 | 53,353 | 0 | 65,316 | 0 | 0 |
| 2034 | 0 | 0 | 0 | 0 | 53,353 | 0 | 65,316 | 0 | 0 |
| 2035 | 0 | 0 | 0 | 0 | 53,353 | 0 | 65,316 | 0 | 0 |
| TOTAL | 136,718 | 2,959 | 7,399 | 200 | 3,224,047 | 10,597 | 4,309,848 | 31,309 | 4,185 |

**TABLE B-5A. Annual Water Quantities Delivered from
Each Aqueduct Reach to Each Contractor**

(in acre-feet)

Sheet 8 of 16

| Calendar Year | CALIFORNIA AQUEDUCT (continued) | | | | | | | | | |
|------------------|--|--------------|--------|--------|------------|---------|-----------|---------|--------|-----------|
| | SOUTH SAN JOAQUIN DIVISION (continued) | | | | | | | | | |
| | Reach 10A | | | | | | | | | Reach 11B |
| | ACWD | AC FC&WCD | CLWA | DRWD | KCWA | | MWDSC | SCVWD | TLBWSD | DRWD |
| (AG) | | | | | (M&I) | | | | | |
| | [75] | [76] | [77] | [78] | [79] | [80] | [81] | [82] | [83] | [84] |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1968 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1969 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,842 | 0 |
| 1970 | 0 | 0 | 0 | 0 | 158 | 0 | 0 | 0 | 4,315 | 0 |
| 1971 | 0 | 0 | 0 | 0 | 9,973 | 0 | 0 | 0 | 0 | 0 |
| 1972 | 0 | 0 | 0 | 0 | 5,876 | 0 | 0 | 0 | 0 | 0 |
| 1973 | 0 | 0 | 0 | 0 | 22,948 | 0 | 0 | 0 | 0 | 0 |
| 1974 | 0 | 0 | 0 | 0 | 22,719 | 10,019 | 0 | 0 | 0 | 0 |
| 1975 | 0 | 0 | 0 | 0 | 72,121 | 2,791 | 0 | 0 | 0 | 0 |
| 1976 | 0 | 0 | 0 | 0 | 50,444 | 74 | 0 | 0 | 0 | 0 |
| 1977 | 0 | 0 | 0 | 0 | 34,451 | 201 | 0 | 0 | 0 | 0 |
| 1978 | 0 | 0 | 0 | 0 | 161,889 | 0 | 0 | 0 | 0 | 0 |
| 1979 | 0 | 0 | 0 | 0 | 153,245 | 285 | 0 | 0 | 0 | 0 |
| 1980 | 0 | 0 | 0 | 0 | 131,836 | 3,780 | 0 | 0 | 0 | 0 |
| 1981 | 0 | 0 | 0 | 0 | 133,500 | 341 | 0 | 0 | 0 | 0 |
| 1982 | 0 | 0 | 0 | 0 | 164,832 | 4,700 | 0 | 0 | 0 | 0 |
| 1983 | 0 | 0 | 0 | 0 | 146,493 | 0 | 0 | 0 | 0 | 0 |
| 1984 | 0 | 0 | 0 | 0 | 150,302 | 6,910 | 0 | 0 | 0 | 0 |
| 1985 | 0 | 0 | 0 | 0 | 153,473 | 6,495 | 0 | 0 | 0 | 0 |
| 1986 | 0 | 0 | 0 | 0 | 198,099 | 5,065 | 0 | 0 | 0 | 0 |
| 1987 | 0 | 0 | 0 | 0 | 226,521 | 900 | 0 | 0 | 0 | 0 |
| 1988 | 0 | 0 | 0 | 0 | 212,495 | 9,529 | 0 | 0 | 0 | 0 |
| 1989 | 0 | 0 | 0 | 0 | 251,979 | 21,038 | 0 | 0 | 0 | 0 |
| 1990 | 0 | 0 | 0 | 0 | 47,472 | 25,189 | 0 | 0 | 0 | 0 |
| 1991 | 0 | 0 | 0 | 0 | 6,820 | 1,142 | 0 | 0 | 0 | 0 |
| 1992 | 0 | 0 | 0 | 0 | 89,390 | 3,685 | 0 | 0 | 0 | 0 |
| 1993 | 0 | 0 | 0 | 0 | 233,862 | 775 | 44,496 | 0 | 0 | 0 |
| 1994 | 0 | 0 | 0 | 0 | 126,792 | 5,227 | 0 | 0 | 0 | 0 |
| 1995 | 0 | 0 | 0 | 0 | 229,448 | 366 | 50,000 | 0 | 0 | 0 |
| 1996 | 6,200 | 0 | 0 | 0 | 199,854 | 6,666 | 95,000 | 45,000 | 0 | 0 |
| 1997 | 10,000 | 0 | 0 | 900 | 157,385 | 3,577 | 125,000 | 35,000 | 0 | 0 |
| 1998 | 3,780 | 1,970 | 0 | 0 | 163,587 | 2,603 | 39,500 | 23,800 | 0 | 0 |
| 1999 | 16,100 | 22,910 | 0 | 0 | 190,787 | 1,657 | 75,850 | 30,000 | 0 | 0 |
| 2000 | 13,380 | 23,940 | 0 | 0 | 283,208 | 7,672 | 0 | 23,730 | 0 | 1,500 |
| 2001 | 0 | 5,000 | 0 | 0 | 98,175 | 160 | 0 | 0 | 0 | 0 |
| 2002 | 2,083 | 14,287 | 24,000 | 0 | 163,998 | 7,645 | 0 | 3,311 | 0 | 0 |
| 2003 | 18,800 | 6,500 | 0 | 0 | 172,243 | 2,648 | 70,940 | 33,000 | 0 | 0 |
| 2004 | 8,000 | 5,740 | 32,522 | 0 | 117,286 | 65,751 | 0 | 0 | 0 | 0 |
| 2005 | 28,422 | 0 | 0 | 0 | 210,578 | 22,087 | 31,210 | 55,448 | 0 | 0 |
| 2006 | 27,447 | 5,740 | 0 | 5,000 | 237,623 | 0 | 0 | 64,036 | 0 | 0 |
| 2007 | 1,029 | 717 | 0 | 3,000 | 203,794 | 0 | 0 | 3,692 | 0 | 0 |
| 2008 | 0 | 0 | 0 | 2,800 | 103,176 | 1,702 | 0 | 4,306 | 0 | 0 |
| 2009 | 0 | 0 | 0 | 2,000 | 95,798 | 690 | 0 | 0 | 0 | 300 |
| 2010 | 0 | 0 | 0 | 0 | 81,825 | 0 | 0 | 0 | 0 | 0 |
| 2011 | 18,316 | 4,700 | 0 | 0 | 204,050 | 0 | 29,719 | 19,000 | 0 | 0 |
| 2012 | 16,108 | 4,700 | 0 | 0 | 204,050 | 0 | 29,719 | 19,000 | 0 | 0 |
| 2013 | 16,108 | 4,700 | 0 | 0 | 204,050 | 0 | 29,719 | 19,000 | 0 | 0 |
| 2014 | 16,108 | 4,700 | 0 | 0 | 204,050 | 0 | 29,719 | 19,000 | 0 | 0 |
| 2015 | 14,866 | 4,700 | 0 | 0 | 204,050 | 0 | 29,719 | 10,000 | 0 | 0 |
| 2016 | 14,866 | 4,700 | 0 | 0 | 204,050 | 0 | 29,719 | 10,000 | 0 | 0 |
| 2017 | 14,866 | 4,700 | 0 | 0 | 204,050 | 0 | 29,719 | 10,000 | 0 | 0 |
| 2018 | 14,866 | 4,700 | 0 | 0 | 204,050 | 0 | 29,719 | 10,000 | 0 | 0 |
| 2019 | 14,866 | 4,700 | 0 | 0 | 204,050 | 0 | 29,719 | 10,000 | 0 | 0 |
| 2020 | 14,866 | 4,700 | 0 | 0 | 204,050 | 0 | 29,719 | 10,000 | 0 | 0 |
| 2021 | 14,866 | 4,700 | 0 | 0 | 204,050 | 0 | 29,719 | 10,000 | 0 | 0 |
| 2022 | 14,866 | 4,700 | 0 | 0 | 204,050 | 0 | 29,719 | 10,000 | 0 | 0 |
| 2023 | 14,866 | 4,700 | 0 | 0 | 204,050 | 0 | 29,719 | 10,000 | 0 | 0 |
| 2024 | 14,866 | 4,700 | 0 | 0 | 204,050 | 0 | 29,719 | 10,000 | 0 | 0 |
| 2025 | 14,866 | 4,700 | 0 | 0 | 204,050 | 0 | 29,719 | 10,000 | 0 | 0 |
| 2026 | 14,866 | 4,700 | 0 | 0 | 204,050 | 0 | 29,719 | 10,000 | 0 | 0 |
| 2027 | 14,866 | 4,700 | 0 | 0 | 204,050 | 0 | 29,719 | 10,000 | 0 | 0 |
| 2028 | 14,866 | 4,700 | 0 | 0 | 204,050 | 0 | 29,719 | 10,000 | 0 | 0 |
| 2029 | 14,866 | 4,700 | 0 | 0 | 204,050 | 0 | 29,719 | 10,000 | 0 | 0 |
| 2030 | 14,866 | 4,700 | 0 | 0 | 204,050 | 0 | 29,719 | 10,000 | 0 | 0 |
| 2031 | 14,866 | 4,700 | 0 | 0 | 204,050 | 0 | 29,719 | 10,000 | 0 | 0 |
| 2032 | 14,866 | 4,700 | 0 | 0 | 204,050 | 0 | 29,719 | 10,000 | 0 | 0 |
| 2033 | 14,866 | 4,700 | 0 | 0 | 204,050 | 0 | 29,719 | 10,000 | 0 | 0 |
| 2034 | 14,866 | 4,700 | 0 | 0 | 204,050 | 0 | 29,719 | 10,000 | 0 | 0 |
| 2035 | 14,866 | 4,700 | 0 | 0 | 204,050 | 0 | 29,719 | 10,000 | 0 | 0 |
| TOTAL | 514,067 | 204,304 | 56,522 | 13,700 | 10,617,705 | 231,370 | 1,274,971 | 607,323 | 7,157 | 1,800 |

**TABLE B-5A. Annual Water Quantities Delivered from
Each Aqueduct Reach to Each Contractor**

(in acre-feet)

Sheet 9 of 18

| Calendar Year | CALIFORNIA AQUEDUCT (continued) | | | | | | | | | | | |
|------------------|--|---------|-----------|---------|-----------|---------|--------|--------|-----------|-----------|---------|-------|
| | SOUTH SAN JOAQUIN DIVISION (continued) | | | | | | | | | | | |
| | Reach 11B | | Reach 12D | | Reach 12E | | | | | | | |
| | KCWA | | KCWA | | ACWD | FC&WCD | CLWA | DRWD | KCWA | | MWDSC | SCVWD |
| | (AG) | (M&I) | (AG) | (M&I) | | | | | (AG) | (M&I) | | |
| | [85] | [86] | [87] | [88] | [89] | [90] | [91] | [92] | [93] | [94] | [95] | [96] |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1968 | 24,776 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1969 | 64,682 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1970 | 72,279 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9,279 | 0 | 0 | 0 |
| 1971 | 63,773 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 28,056 | 0 | 0 | 0 |
| 1972 | 72,358 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 62,342 | 0 | 0 | 0 |
| 1973 | 67,544 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13,082 | 0 | 0 | 0 |
| 1974 | 87,476 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4,248 | 2,651 | 0 | 0 |
| 1975 | 85,675 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10,787 | 0 | 0 | 0 |
| 1976 | 85,067 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20,555 | 37,519 | 0 | 0 |
| 1977 | 29,603 | 3,981 | 0 | 0 | 0 | 0 | 0 | 0 | 1,737 | 20,280 | 0 | 0 |
| 1978 | 88,753 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15,011 | 47,133 | 0 | 0 |
| 1979 | 108,379 | 484 | 0 | 0 | 0 | 0 | 0 | 0 | 61,567 | 50,740 | 0 | 0 |
| 1980 | 103,207 | 3,112 | 0 | 0 | 0 | 0 | 0 | 0 | 22,252 | 32,039 | 0 | 0 |
| 1981 | 104,395 | 494 | 0 | 0 | 0 | 0 | 0 | 0 | 58,470 | 59,917 | 0 | 0 |
| 1982 | 99,081 | 798 | 0 | 0 | 0 | 0 | 0 | 0 | 75,587 | 36,139 | 0 | 0 |
| 1983 | 94,117 | 2,069 | 0 | 0 | 0 | 0 | 0 | 0 | 10,950 | 0 | 0 | 0 |
| 1984 | 124,819 | 2,349 | 0 | 0 | 0 | 0 | 0 | 0 | 39,929 | 63,941 | 0 | 0 |
| 1985 | 118,646 | 10,666 | 0 | 0 | 0 | 0 | 0 | 0 | 84,117 | 69,839 | 0 | 0 |
| 1986 | 124,836 | 8,673 | 0 | 0 | 0 | 0 | 0 | 0 | 51,540 | 62,109 | 0 | 0 |
| 1987 | 111,877 | 13,074 | 0 | 0 | 0 | 0 | 0 | 0 | 86,223 | 95,297 | 0 | 0 |
| 1988 | 114,031 | 13,509 | 0 | 0 | 0 | 0 | 0 | 0 | 123,249 | 86,390 | 0 | 0 |
| 1989 | 127,058 | 9,986 | 0 | 0 | 0 | 0 | 0 | 0 | 146,544 | 83,965 | 0 | 0 |
| 1990 | 104,107 | 9,319 | 0 | 0 | 0 | 0 | 0 | 0 | 38,973 | 82,164 | 0 | 0 |
| 1991 | 118 | 6,099 | 0 | 0 | 0 | 0 | 0 | 0 | 303 | 8,842 | 0 | 0 |
| 1992 | 35,093 | 7,419 | 0 | 0 | 0 | 0 | 0 | 0 | 57,048 | 47,181 | 0 | 0 |
| 1993 | 72,645 | 2,686 | 0 | 0 | 0 | 0 | 0 | 0 | 285,554 | 84,922 | 5,504 | 0 |
| 1994 | 71,202 | 3,506 | 0 | 0 | 0 | 0 | 0 | 0 | 77,839 | 66,188 | 0 | 0 |
| 1995 | 97,072 | 1,154 | 0 | 0 | 0 | 0 | 0 | 1,000 | 181,097 | 107,130 | 0 | 0 |
| 1996 | 96,250 | 1,185 | 0 | 0 | 0 | 0 | 0 | 4,131 | 134,138 | 89,257 | 0 | 0 |
| 1997 | 104,823 | 1,111 | 0 | 0 | 0 | 0 | 0 | 8,012 | 128,329 | 32,061 | 1,486 | 0 |
| 1998 | 72,646 | 1,311 | 0 | 0 | 0 | 0 | 0 | 5,925 | 88,998 | 28,258 | 24,234 | 0 |
| 1999 | 92,262 | 2,127 | 0 | 0 | 0 | 0 | 0 | 1,321 | 255,343 | 110,161 | 62,162 | 0 |
| 2000 | 89,622 | 3,793 | 0 | 21 | 0 | 0 | 0 | 953 | 89,702 | 78,285 | 149,731 | 0 |
| 2001 | 73,105 | 636 | 0 | 41 | 0 | 0 | 0 | 0 | 46,205 | 5,256 | 0 | 0 |
| 2002 | 91,123 | 1,457 | 6 | 760 | 0 | 0 | 0 | 0 | 96,231 | 39,104 | 0 | 0 |
| 2003 | 87,174 | 1,379 | 152 | 2,431 | 0 | 0 | 0 | 0 | 87,339 | 64,196 | 45,989 | 0 |
| 2004 | 97,722 | 1,299 | 768 | 3,419 | 0 | 0 | 0 | 1,600 | 95,893 | 52,303 | 0 | 0 |
| 2005 | 93,554 | 824 | 644 | 2,841 | 1,878 | 3,419 | 20,000 | 1,154 | 340,281 | 43,835 | 15,384 | 2,619 |
| 2006 | 98,417 | 0 | 1,556 | 2,513 | 0 | 10,000 | 20,000 | 0 | 296,230 | 82,207 | 5,065 | 0 |
| 2007 | 94,334 | 4,030 | 2,284 | 2,164 | 0 | 0 | 8,200 | 0 | 87,764 | 1,179 | 0 | 0 |
| 2008 | 93,417 | 263 | 3,000 | 1,514 | 0 | 0 | 0 | 0 | 76,351 | 0 | 0 | 0 |
| 2009 | 96,776 | 127 | 4,274 | 564 | 0 | 0 | 0 | 0 | 82,714 | 0 | 0 | 0 |
| 2010 | 67,243 | 0 | 0 | 7,019 | 0 | 0 | 22,944 | 0 | 46,822 | 28,782 | 0 | 0 |
| 2011 | 67,700 | 15,000 | 0 | 6,500 | 0 | 14,000 | 0 | 0 | 151,324 | 108,642 | 0 | 0 |
| 2012 | 67,700 | 15,000 | 0 | 6,500 | 0 | 14,000 | 0 | 0 | 151,324 | 108,642 | 0 | 0 |
| 2013 | 67,700 | 15,000 | 0 | 6,500 | 0 | 14,000 | 0 | 0 | 151,324 | 108,642 | 0 | 0 |
| 2014 | 67,700 | 15,000 | 0 | 6,500 | 0 | 14,000 | 0 | 0 | 151,324 | 108,642 | 0 | 0 |
| 2015 | 67,700 | 15,000 | 0 | 6,500 | 0 | 14,000 | 0 | 0 | 175,512 | 108,642 | 0 | 0 |
| 2016 | 67,700 | 15,000 | 0 | 6,500 | 0 | 14,000 | 0 | 0 | 175,512 | 108,642 | 0 | 0 |
| 2017 | 67,700 | 15,000 | 0 | 6,500 | 0 | 14,000 | 0 | 0 | 175,512 | 108,642 | 0 | 0 |
| 2018 | 67,700 | 15,000 | 0 | 6,500 | 0 | 14,000 | 0 | 0 | 175,512 | 108,642 | 0 | 0 |
| 2019 | 67,700 | 15,000 | 0 | 6,500 | 0 | 14,000 | 0 | 0 | 175,512 | 108,642 | 0 | 0 |
| 2020 | 67,700 | 15,000 | 0 | 6,500 | 0 | 14,000 | 0 | 0 | 175,512 | 108,642 | 0 | 0 |
| 2021 | 67,700 | 15,000 | 0 | 6,500 | 0 | 14,000 | 0 | 0 | 175,512 | 108,642 | 0 | 0 |
| 2022 | 67,700 | 15,000 | 0 | 6,500 | 0 | 14,000 | 0 | 0 | 175,512 | 108,642 | 0 | 0 |
| 2023 | 67,700 | 15,000 | 0 | 6,500 | 0 | 14,000 | 0 | 0 | 175,512 | 108,642 | 0 | 0 |
| 2024 | 67,700 | 15,000 | 0 | 6,500 | 0 | 14,000 | 0 | 0 | 175,512 | 108,642 | 0 | 0 |
| 2025 | 67,700 | 15,000 | 0 | 6,500 | 0 | 14,000 | 0 | 0 | 175,512 | 108,642 | 0 | 0 |
| 2026 | 67,700 | 15,000 | 0 | 6,500 | 0 | 14,000 | 0 | 0 | 175,512 | 108,642 | 0 | 0 |
| 2027 | 67,700 | 15,000 | 0 | 6,500 | 0 | 14,000 | 0 | 0 | 175,512 | 108,642 | 0 | 0 |
| 2028 | 67,700 | 15,000 | 0 | 6,500 | 0 | 14,000 | 0 | 0 | 175,512 | 108,642 | 0 | 0 |
| 2029 | 67,700 | 15,000 | 0 | 6,500 | 0 | 14,000 | 0 | 0 | 175,512 | 108,642 | 0 | 0 |
| 2030 | 67,700 | 15,000 | 0 | 6,500 | 0 | 14,000 | 0 | 0 | 175,512 | 108,642 | 0 | 0 |
| 2031 | 67,700 | 15,000 | 0 | 6,500 | 0 | 14,000 | 0 | 0 | 175,512 | 108,642 | 0 | 0 |
| 2032 | 67,700 | 15,000 | 0 | 6,500 | 0 | 14,000 | 0 | 0 | 175,512 | 108,642 | 0 | 0 |
| 2033 | 67,700 | 15,000 | 0 | 6,500 | 0 | 14,000 | 0 | 0 | 175,512 | 108,642 | 0 | 0 |
| 2034 | 67,700 | 15,000 | 0 | 6,500 | 0 | 14,000 | 0 | 0 | 175,512 | 108,642 | 0 | 0 |
| 2035 | 67,700 | 15,000 | 0 | 6,500 | 0 | 14,000 | 0 | 0 | 175,512 | 108,642 | 0 | 0 |
| TOTAL | 5,393,637 | 493,930 | 12,684 | 185,787 | 1,878 | 363,419 | 71,144 | 24,096 | 7,809,727 | 4,515,220 | 309,555 | 2,619 |

**TABLE B-5A. Annual Water Quantities Delivered from
Each Aqueduct Reach to Each Contractor**

(in acre-feet)

Sheet 10 of 18

| Calendar Year | CALIFORNIA AQUEDUCT (continued) | | | | | | | | |
|------------------|--|--------|-----------|---------|-------|--------|-----------|-----------|--------|
| | SOUTH SAN JOAQUIN DIVISION (continued) | | | | | | | | |
| | Reach 13B | | | | | | Reach 14A | | |
| | AC | DRWD | KCWA | | MWDSC | SCVWD | TLBWSD | KCWA | |
| | | | (AG) | (M&I) | | | | (AG) | (M&I) |
| | [97] | [98] | [99] | [100] | [101] | [102] | [103] | [104] | [105] |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1968 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1969 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1970 | 0 | 0 | 4,891 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23,844 | 0 |
| 1972 | 0 | 0 | 17,388 | 0 | 0 | 0 | 0 | 26,621 | 0 |
| 1973 | 0 | 0 | 9,297 | 0 | 0 | 0 | 0 | 15,328 | 0 |
| 1974 | 0 | 0 | 4,246 | 8,038 | 0 | 0 | 0 | 7,794 | 0 |
| 1975 | 0 | 0 | 7,059 | 8,538 | 0 | 0 | 0 | 10,306 | 0 |
| 1976 | 0 | 0 | 8,855 | 5,626 | 0 | 0 | 0 | 268 | 0 |
| 1977 | 0 | 0 | 5,024 | 0 | 0 | 0 | 0 | 8,299 | 0 |
| 1978 | 0 | 0 | 7,601 | 21,773 | 0 | 0 | 0 | 34,029 | 0 |
| 1979 | 0 | 0 | 17,766 | 5,663 | 0 | 0 | 0 | 27,356 | 3,012 |
| 1980 | 0 | 0 | 22,515 | 0 | 0 | 0 | 0 | 16,876 | 4,312 |
| 1981 | 0 | 0 | 14,037 | 7,844 | 0 | 0 | 0 | 13,007 | 4,511 |
| 1982 | 0 | 0 | 25,553 | 0 | 0 | 0 | 0 | 24,240 | 3,735 |
| 1983 | 0 | 0 | 3,491 | 0 | 0 | 0 | 0 | 20,302 | 1,168 |
| 1984 | 0 | 0 | 26,178 | 12,117 | 0 | 0 | 0 | 35,369 | 137 |
| 1985 | 0 | 0 | 67,711 | 0 | 0 | 0 | 0 | 33,103 | 206 |
| 1986 | 0 | 0 | 66,551 | 0 | 0 | 0 | 0 | 26,384 | 180 |
| 1987 | 0 | 0 | 40,374 | 5,609 | 0 | 0 | 0 | 30,098 | 610 |
| 1988 | 0 | 0 | 47,167 | 9,298 | 0 | 0 | 0 | 32,778 | 622 |
| 1989 | 0 | 0 | 57,114 | 5,504 | 0 | 0 | 0 | 29,292 | 721 |
| 1990 | 0 | 0 | 20,423 | 7,645 | 0 | 0 | 0 | 26,800 | 673 |
| 1991 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 768 |
| 1992 | 0 | 0 | 17,449 | 789 | 0 | 0 | 0 | 16,238 | 673 |
| 1993 | 0 | 0 | 88,157 | 12,798 | 0 | 0 | 0 | 17,832 | 629 |
| 1994 | 0 | 0 | 33,148 | 2,494 | 0 | 0 | 0 | 16,760 | 2,513 |
| 1995 | 0 | 0 | 110,685 | 8,751 | 0 | 0 | 3,500 | 21,234 | 3 |
| 1996 | 0 | 0 | 64,849 | 28,063 | 0 | 0 | 0 | 26,978 | 0 |
| 1997 | 0 | 0 | 49,312 | 43,803 | 0 | 0 | 0 | 23,035 | 0 |
| 1998 | 0 | 0 | 40,085 | 29,444 | 5,500 | 0 | 0 | 15,706 | 0 |
| 1999 | 0 | 0 | 92,998 | 12,969 | 0 | 0 | 0 | 21,153 | 0 |
| 2000 | 0 | 0 | 98,136 | 4,066 | 0 | 0 | 0 | 19,264 | 0 |
| 2001 | 0 | 1,733 | 29,881 | 4,044 | 0 | 0 | 0 | 12,451 | 1 |
| 2002 | 0 | 736 | 55,493 | 15,951 | 0 | 0 | 0 | 11,161 | 0 |
| 2003 | 0 | 350 | 91,739 | 35,239 | 1,865 | 0 | 0 | 13,685 | 0 |
| 2004 | 0 | 1,657 | 73,801 | 1,922 | 0 | 0 | 0 | 13,030 | 0 |
| 2005 | 2,321 | 14,540 | 269,631 | 21,781 | 192 | 9,014 | 0 | 15,663 | 0 |
| 2006 | 0 | 5,670 | 196,116 | 11,787 | 0 | 0 | 0 | 17,779 | 0 |
| 2007 | 0 | 2,161 | 72,240 | 0 | 0 | 0 | 0 | 21,435 | 0 |
| 2008 | 0 | 0 | 9,785 | 200 | 0 | 2,324 | 0 | 20,087 | 0 |
| 2009 | 0 | 0 | 12,060 | 0 | 0 | 0 | 0 | 22,281 | 0 |
| 2010 | 0 | 0 | 3,193 | 0 | 0 | 0 | 0 | 16,977 | 0 |
| 2011 | 0 | 0 | 48,280 | 0 | 0 | 0 | 0 | 22,200 | 0 |
| 2012 | 0 | 0 | 48,280 | 0 | 0 | 0 | 0 | 22,200 | 0 |
| 2013 | 0 | 0 | 48,280 | 0 | 0 | 0 | 0 | 22,200 | 0 |
| 2014 | 0 | 0 | 48,280 | 0 | 0 | 0 | 0 | 22,200 | 0 |
| 2015 | 0 | 0 | 48,280 | 0 | 0 | 0 | 0 | 22,200 | 0 |
| 2016 | 0 | 0 | 48,280 | 0 | 0 | 0 | 0 | 22,200 | 0 |
| 2017 | 0 | 0 | 48,280 | 0 | 0 | 0 | 0 | 22,200 | 0 |
| 2018 | 0 | 0 | 48,280 | 0 | 0 | 0 | 0 | 22,200 | 0 |
| 2019 | 0 | 0 | 48,280 | 0 | 0 | 0 | 0 | 22,200 | 0 |
| 2020 | 0 | 0 | 48,280 | 0 | 0 | 0 | 0 | 22,200 | 0 |
| 2021 | 0 | 0 | 48,280 | 0 | 0 | 0 | 0 | 22,200 | 0 |
| 2022 | 0 | 0 | 48,280 | 0 | 0 | 0 | 0 | 22,200 | 0 |
| 2023 | 0 | 0 | 48,280 | 0 | 0 | 0 | 0 | 22,200 | 0 |
| 2024 | 0 | 0 | 48,280 | 0 | 0 | 0 | 0 | 22,200 | 0 |
| 2025 | 0 | 0 | 48,280 | 0 | 0 | 0 | 0 | 22,200 | 0 |
| 2026 | 0 | 0 | 48,280 | 0 | 0 | 0 | 0 | 22,200 | 0 |
| 2027 | 0 | 0 | 48,280 | 0 | 0 | 0 | 0 | 22,200 | 0 |
| 2028 | 0 | 0 | 48,280 | 0 | 0 | 0 | 0 | 22,200 | 0 |
| 2029 | 0 | 0 | 48,280 | 0 | 0 | 0 | 0 | 22,200 | 0 |
| 2030 | 0 | 0 | 48,280 | 0 | 0 | 0 | 0 | 22,200 | 0 |
| 2031 | 0 | 0 | 48,280 | 0 | 0 | 0 | 0 | 22,200 | 0 |
| 2032 | 0 | 0 | 48,280 | 0 | 0 | 0 | 0 | 22,200 | 0 |
| 2033 | 0 | 0 | 48,280 | 0 | 0 | 0 | 0 | 22,200 | 0 |
| 2034 | 0 | 0 | 48,280 | 0 | 0 | 0 | 0 | 22,200 | 0 |
| 2035 | 0 | 0 | 48,280 | 0 | 0 | 0 | 0 | 22,200 | 0 |
| TOTAL | 2,321 | 26,847 | 3,088,999 | 331,756 | 7,557 | 11,338 | 3,500 | 1,339,843 | 24,474 |

**TABLE B-5A. Annual Water Quantities Delivered from
Each Aqueduct Reach to Each Contractor**

(in acre-feet)

Sheet 11 of 18

| Calendar Year | CALIFORNIA AQUEDUCT (continued) | | | | | | | | | |
|------------------|--|-------|-----------|-------|--------|-----------|-------|-----------|-----------|---------|
| | SOUTH SAN JOAQUIN DIVISION (continued) | | | | | | | | | |
| | Reach 14B | | Reach 14C | | | Reach 15A | | Reach 16A | | |
| | KCWA | | KCWA | | MWDSC | KCWA | | AVEKWA | KCWA | |
| | (AG) | (M&I) | (AG) | (M&I) | | (AG) | (M&I) | | (AG) | (M&I) |
| | [106] | [107] | [108] | [109] | [110] | [111] | [112] | [113] | [114] | [115] |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1968 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1969 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1970 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1971 | 49,929 | 0 | 24,187 | 0 | 0 | 3,552 | 0 | 0 | 0 | 0 |
| 1972 | 77,034 | 0 | 35,016 | 0 | 0 | 6,064 | 0 | 0 | 4,768 | 0 |
| 1973 | 47,040 | 0 | 19,043 | 0 | 0 | 19,916 | 0 | 0 | 1,961 | 0 |
| 1974 | 32,356 | 0 | 12,601 | 0 | 0 | 18,000 | 0 | 0 | 1,564 | 3,000 |
| 1975 | 27,736 | 0 | 12,783 | 0 | 0 | 35,420 | 0 | 0 | 9,867 | 3,200 |
| 1976 | 35,296 | 0 | 9,005 | 0 | 0 | 39,551 | 0 | 0 | 11,667 | 3,500 |
| 1977 | 13,539 | 0 | 3,757 | 0 | 0 | 6,158 | 0 | 0 | 685 | 3,420 |
| 1978 | 72,351 | 0 | 24,542 | 0 | 0 | 31,148 | 0 | 0 | 1,655 | 7,989 |
| 1979 | 59,413 | 0 | 22,372 | 0 | 0 | 38,602 | 0 | 0 | 15,808 | 2,813 |
| 1980 | 40,513 | 0 | 19,953 | 0 | 0 | 37,817 | 0 | 0 | 16,145 | 2,700 |
| 1981 | 42,753 | 8 | 18,729 | 7 | 0 | 39,033 | 0 | 0 | 18,156 | 2,636 |
| 1982 | 57,739 | 184 | 26,479 | 0 | 0 | 47,782 | 0 | 0 | 16,577 | 1,921 |
| 1983 | 57,922 | 0 | 26,613 | 0 | 0 | 37,426 | 0 | 0 | 17,907 | 1,400 |
| 1984 | 79,179 | 10 | 34,996 | 2 | 0 | 49,848 | 0 | 0 | 24,246 | 1,338 |
| 1985 | 72,855 | 0 | 31,758 | 0 | 0 | 44,078 | 0 | 0 | 16,820 | 1,309 |
| 1986 | 70,864 | 0 | 34,566 | 0 | 0 | 42,461 | 0 | 0 | 15,559 | 1,213 |
| 1987 | 67,710 | 9 | 31,019 | 10 | 0 | 34,748 | 0 | 0 | 10,170 | 1,665 |
| 1988 | 75,968 | 19 | 37,165 | 1 | 0 | 41,978 | 16 | 0 | 8,987 | 1,925 |
| 1989 | 82,201 | 7 | 37,800 | 5 | 0 | 43,239 | 2 | 0 | 8,649 | 2,668 |
| 1990 | 81,076 | 13 | 34,174 | 9 | 0 | 36,347 | 6 | 0 | 8,608 | 2,819 |
| 1991 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,000 | 343 | 2,588 |
| 1992 | 41,143 | 464 | 18,084 | 0 | 0 | 24,243 | 0 | 0 | 8,275 | 2,087 |
| 1993 | 62,493 | 0 | 28,103 | 0 | 0 | 27,997 | 0 | 0 | 9,167 | 2,494 |
| 1994 | 54,011 | 3,000 | 22,624 | 1,000 | 0 | 29,511 | 0 | 0 | 13,877 | 3,011 |
| 1995 | 67,391 | 0 | 31,285 | 0 | 0 | 26,134 | 0 | 0 | 15,042 | 3,188 |
| 1996 | 85,936 | 0 | 38,879 | 0 | 0 | 36,186 | 0 | 0 | 18,142 | 2,573 |
| 1997 | 79,790 | 0 | 33,512 | 0 | 0 | 36,281 | 0 | 0 | 17,048 | 3,997 |
| 1998 | 58,132 | 0 | 23,097 | 0 | 0 | 28,712 | 0 | 0 | 17,032 | 3,751 |
| 1999 | 67,576 | 0 | 31,489 | 0 | 0 | 36,801 | 0 | 0 | 24,071 | 3,316 |
| 2000 | 70,585 | 0 | 33,716 | 0 | 0 | 40,063 | 0 | 0 | 20,919 | 3,015 |
| 2001 | 49,602 | 0 | 23,557 | 0 | 0 | 31,192 | 0 | 0 | 13,476 | 1,894 |
| 2002 | 52,762 | 0 | 27,138 | 0 | 0 | 41,552 | 0 | 0 | 14,520 | 4,227 |
| 2003 | 44,576 | 0 | 24,783 | 0 | 12,911 | 36,602 | 0 | 0 | 16,799 | 1,168 |
| 2004 | 52,012 | 0 | 30,313 | 0 | 0 | 40,184 | 0 | 0 | 19,714 | 2,239 |
| 2005 | 56,739 | 0 | 21,979 | 0 | 0 | 39,870 | 0 | 0 | 18,353 | 167 |
| 2006 | 65,142 | 0 | 20,193 | 1,413 | 5,440 | 46,244 | 0 | 0 | 22,570 | 279 |
| 2007 | 67,955 | 0 | 24,947 | 0 | 1,881 | 47,390 | 0 | 0 | 26,229 | 204 |
| 2008 | 63,497 | 0 | 27,847 | 0 | 0 | 33,029 | 0 | 0 | 18,426 | 3,834 |
| 2009 | 60,726 | 0 | 27,185 | 0 | 0 | 26,007 | 0 | 0 | 19,517 | 1,531 |
| 2010 | 46,779 | 0 | 15,962 | 0 | 0 | 25,974 | 0 | 0 | 19,293 | 5,970 |
| 2011 | 72,800 | 0 | 29,500 | 0 | 0 | 53,000 | 0 | 0 | 23,200 | 3,858 |
| 2012 | 72,800 | 0 | 29,500 | 0 | 0 | 53,000 | 0 | 0 | 23,200 | 3,858 |
| 2013 | 72,800 | 0 | 29,500 | 0 | 0 | 53,000 | 0 | 0 | 23,200 | 3,858 |
| 2014 | 72,800 | 0 | 29,500 | 0 | 0 | 53,000 | 0 | 0 | 23,200 | 3,858 |
| 2015 | 72,800 | 0 | 29,500 | 0 | 0 | 53,000 | 0 | 0 | 23,200 | 3,858 |
| 2016 | 72,800 | 0 | 29,500 | 0 | 0 | 53,000 | 0 | 0 | 23,200 | 3,858 |
| 2017 | 72,800 | 0 | 29,500 | 0 | 0 | 53,000 | 0 | 0 | 23,200 | 3,858 |
| 2018 | 72,800 | 0 | 29,500 | 0 | 0 | 53,000 | 0 | 0 | 23,200 | 3,858 |
| 2019 | 72,800 | 0 | 29,500 | 0 | 0 | 53,000 | 0 | 0 | 23,200 | 3,858 |
| 2020 | 72,800 | 0 | 29,500 | 0 | 0 | 53,000 | 0 | 0 | 23,200 | 3,858 |
| 2021 | 72,800 | 0 | 29,500 | 0 | 0 | 53,000 | 0 | 0 | 23,200 | 3,858 |
| 2022 | 72,800 | 0 | 29,500 | 0 | 0 | 53,000 | 0 | 0 | 23,200 | 3,858 |
| 2023 | 72,800 | 0 | 29,500 | 0 | 0 | 53,000 | 0 | 0 | 23,200 | 3,858 |
| 2024 | 72,800 | 0 | 29,500 | 0 | 0 | 53,000 | 0 | 0 | 23,200 | 3,858 |
| 2025 | 72,800 | 0 | 29,500 | 0 | 0 | 53,000 | 0 | 0 | 23,200 | 3,858 |
| 2026 | 72,800 | 0 | 29,500 | 0 | 0 | 53,000 | 0 | 0 | 23,200 | 3,858 |
| 2027 | 72,800 | 0 | 29,500 | 0 | 0 | 53,000 | 0 | 0 | 23,200 | 3,858 |
| 2028 | 72,800 | 0 | 29,500 | 0 | 0 | 53,000 | 0 | 0 | 23,200 | 3,858 |
| 2029 | 72,800 | 0 | 29,500 | 0 | 0 | 53,000 | 0 | 0 | 23,200 | 3,858 |
| 2030 | 72,800 | 0 | 29,500 | 0 | 0 | 53,000 | 0 | 0 | 23,200 | 3,858 |
| 2031 | 72,800 | 0 | 29,500 | 0 | 0 | 53,000 | 0 | 0 | 23,200 | 3,858 |
| 2032 | 72,800 | 0 | 29,500 | 0 | 0 | 53,000 | 0 | 0 | 23,200 | 3,858 |
| 2033 | 72,800 | 0 | 29,500 | 0 | 0 | 53,000 | 0 | 0 | 23,200 | 3,858 |
| 2034 | 72,800 | 0 | 29,500 | 0 | 0 | 53,000 | 0 | 0 | 23,200 | 3,858 |
| 2035 | 72,800 | 0 | 29,500 | 0 | 0 | 53,000 | 0 | 0 | 23,200 | 3,858 |
| TOTAL | 4,110,324 | 3,714 | 1,738,751 | 2,447 | 20,232 | 2,632,140 | 24 | 2,000 | 1,122,612 | 193,499 |

**TABLE B-5A. Annual Water Quantities Delivered from
Each Aqueduct Reach to Each Contractor**

(in acre-feet)

Sheet 12 of 18

| Calendar Year | CALIFORNIA AQUEDUCT (continued) | | | | | | | | |
|------------------|---------------------------------|-----------|--------|-----------|-------|--------|-----------|-------|---------|
| | MOJAVE DIVISION | | | | | | | | |
| | Reach 18A | Reach 19 | | Reach 20A | | | Reach 20B | | |
| | AVEKWA | AVEKWA | MWA | AVEKWA | MWA | PWD | AVEKWA | LCID | PWD |
| | [116] | [117] | [118] | [119] | [120] | [121] | [122] | [123] | [124] |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1968 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1969 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1970 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1972 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1973 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1974 | 0 | 1,223 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1975 | 0 | 7,622 | 0 | 420 | 0 | 0 | 0 | 0 | 0 |
| 1976 | 3,808 | 23,063 | 0 | 471 | 0 | 0 | 416 | 0 | 0 |
| 1977 | 1,231 | 8,927 | 0 | 773 | 0 | 0 | 271 | 0 | 0 |
| 1978 | 1,321 | 36,333 | 0 | 5,549 | 0 | 0 | 934 | 0 | 0 |
| 1979 | 2,098 | 49,910 | 0 | 7,555 | 0 | 0 | 930 | 0 | 0 |
| 1980 | 2,610 | 61,534 | 0 | 7,605 | 0 | 0 | 655 | 0 | 0 |
| 1981 | 2,340 | 65,690 | 0 | 10,333 | 0 | 0 | 966 | 0 | 0 |
| 1982 | 1,669 | 41,127 | 0 | 7,313 | 0 | 0 | 8 | 0 | 0 |
| 1983 | 43 | 26,377 | 0 | 6,253 | 0 | 0 | 20 | 0 | 0 |
| 1984 | 90 | 22,462 | 0 | 9,558 | 0 | 0 | 2 | 0 | 0 |
| 1985 | 8 | 23,440 | 0 | 11,613 | 0 | 1,510 | 217 | 0 | 32 |
| 1986 | 8 | 16,898 | 0 | 13,808 | 0 | 3,041 | 0 | 0 | 45 |
| 1987 | 0 | 15,958 | 0 | 15,493 | 0 | 2,389 | 151 | 0 | 1,624 |
| 1988 | 0 | 13,471 | 0 | 17,117 | 0 | 366 | 281 | 0 | 1,261 |
| 1989 | 0 | 18,007 | 0 | 23,481 | 0 | 381 | 112 | 0 | 7,848 |
| 1990 | 0 | 17,281 | 0 | 25,843 | 0 | 282 | 84 | 0 | 8,292 |
| 1991 | 0 | 728 | 0 | 4,282 | 1,391 | 84 | 131 | 0 | 3,830 |
| 1992 | 0 | 7,238 | 0 | 18,518 | 1,310 | 185 | 650 | 0 | 3,850 |
| 1993 | 0 | 13,340 | 0 | 23,662 | 1,514 | 164 | 996 | 0 | 7,597 |
| 1994 | 0 | 19,122 | 0 | 25,250 | 1,399 | 299 | 124 | 0 | 8,119 |
| 1995 | 0 | 20,222 | 0 | 22,385 | 1,227 | 328 | 0 | 0 | 6,633 |
| 1996 | 0 | 23,919 | 0 | 26,979 | 1,316 | 354 | 0 | 0 | 11,080 |
| 1997 | 0 | 28,834 | 64 | 27,999 | 1,272 | 313 | 0 | 0 | 11,548 |
| 1998 | 0 | 22,466 | 1,345 | 25,985 | 0 | 195 | 0 | 0 | 8,557 |
| 1999 | 0 | 30,944 | 1,439 | 32,409 | 0 | 377 | 36 | 0 | 12,901 |
| 2000 | 0 | 34,786 | 1,361 | 37,819 | 0 | 0 | 80 | 0 | 9,060 |
| 2001 | 0 | 24,370 | 1,385 | 33,216 | 0 | 0 | 282 | 0 | 10,427 |
| 2002 | 0 | 14,297 | 1,370 | 36,311 | 0 | 0 | 1,662 | 0 | 18,496 |
| 2003 | 0 | 12,145 | 1,285 | 39,532 | 0 | 0 | 2,289 | 0 | 11,547 |
| 2004 | 0 | 11,201 | 1,223 | 40,408 | 0 | 0 | 1,774 | 0 | 12,139 |
| 2005 | 11 | 11,804 | 1,051 | 41,496 | 0 | 0 | 1,336 | 0 | 11,678 |
| 2006 | 0 | 18,438 | 1,021 | 53,878 | 0 | 0 | 1,415 | 0 | 12,487 |
| 2007 | 0 | 22,916 | 1,176 | 47,639 | 0 | 0 | 1,349 | 0 | 19,609 |
| 2008 | 0 | 9,096 | 1,238 | 33,919 | 0 | 0 | 792 | 25 | 14,255 |
| 2009 | 0 | 5,717 | 1,345 | 35,402 | 0 | 0 | 366 | 42 | 15,339 |
| 2010 | 1,592 | 16,193 | 1,545 | 58,612 | 0 | 0 | 1,850 | 0 | 12,706 |
| 2011 | 0 | 17,007 | 1,320 | 44,309 | 0 | 0 | 1,494 | 0 | 21,300 |
| 2012 | 0 | 17,517 | 1,320 | 45,638 | 0 | 0 | 1,539 | 0 | 21,300 |
| 2013 | 0 | 18,042 | 1,320 | 47,006 | 0 | 0 | 1,584 | 0 | 21,300 |
| 2014 | 0 | 18,582 | 1,320 | 48,418 | 0 | 0 | 1,634 | 0 | 21,300 |
| 2015 | 0 | 18,582 | 1,320 | 114,604 | 0 | 0 | 1,634 | 0 | 21,300 |
| 2016 | 0 | 18,840 | 1,320 | 114,103 | 0 | 0 | 1,680 | 0 | 21,300 |
| 2017 | 0 | 19,715 | 1,320 | 112,972 | 0 | 0 | 1,732 | 0 | 21,300 |
| 2018 | 0 | 20,306 | 1,320 | 112,119 | 0 | 0 | 1,785 | 0 | 21,300 |
| 2019 | 0 | 20,915 | 1,320 | 111,243 | 0 | 0 | 1,838 | 0 | 21,300 |
| 2020 | 0 | 21,543 | 1,320 | 110,336 | 0 | 0 | 1,893 | 0 | 21,300 |
| 2021 | 0 | 34,612 | 1,320 | 92,028 | 0 | 0 | 3,108 | 0 | 21,300 |
| 2022 | 0 | 34,612 | 1,320 | 92,028 | 0 | 0 | 3,108 | 0 | 21,300 |
| 2023 | 0 | 34,612 | 1,320 | 92,028 | 0 | 0 | 3,108 | 0 | 21,300 |
| 2024 | 0 | 34,612 | 1,320 | 92,028 | 0 | 0 | 3,108 | 0 | 21,300 |
| 2025 | 0 | 34,612 | 1,320 | 92,028 | 0 | 0 | 3,108 | 0 | 21,300 |
| 2026 | 0 | 34,612 | 1,320 | 92,028 | 0 | 0 | 3,108 | 0 | 21,300 |
| 2027 | 0 | 34,612 | 1,320 | 92,028 | 0 | 0 | 3,108 | 0 | 21,300 |
| 2028 | 0 | 34,612 | 1,320 | 92,028 | 0 | 0 | 3,108 | 0 | 21,300 |
| 2029 | 0 | 34,612 | 1,320 | 92,028 | 0 | 0 | 3,108 | 0 | 21,300 |
| 2030 | 0 | 34,612 | 1,320 | 92,028 | 0 | 0 | 3,108 | 0 | 21,300 |
| 2031 | 0 | 34,612 | 1,320 | 92,028 | 0 | 0 | 3,108 | 0 | 21,300 |
| 2032 | 0 | 34,612 | 1,320 | 92,028 | 0 | 0 | 3,108 | 0 | 21,300 |
| 2033 | 0 | 34,612 | 1,320 | 92,028 | 0 | 0 | 3,108 | 0 | 21,300 |
| 2034 | 0 | 34,612 | 1,320 | 92,028 | 0 | 0 | 3,108 | 0 | 21,300 |
| 2035 | 0 | 34,612 | 1,320 | 92,028 | 0 | 0 | 3,108 | 0 | 21,300 |
| TOTAL | 16,829 | 1,507,328 | 49,848 | 3,070,054 | 9,429 | 10,268 | 83,612 | 67 | 773,460 |

**TABLE B-5A. Annual Water Quantities Delivered from
Each Aqueduct Reach to Each Contractor**

(in acre-feet)

Sheet 13 of 18

| Calendar Year | CALIFORNIA AQUEDUCT (continued) | | | | | | | | | |
|------------------|---------------------------------|--------|-------|-----------|-------|------------|----------|---------|-----------|-----------|
| | MOJAVE DIVISION (continued) | | | | | | | | | |
| | Reach 21 | | | Reach 22A | | Reach 22B | | | | |
| | AVEKWA | LCID | PWD | AVEKWA | LCID | AVEKWA (d) | CVWD (e) | DWA (e) | MWA | MWDSC (e) |
| | [125] | [126] | [127] | [128] | [129] | [130] | [131] | [132] | [133] | [134] |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1968 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1969 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1970 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1972 | 0 | 338 | 0 | 0 | 0 | 0 | 0 | 0 | 55 | 0 |
| 1973 | 0 | 290 | 0 | 0 | 0 | 0 | 5,800 | 9,000 | 0 | (14,800) |
| 1974 | 0 | 400 | 0 | 0 | 0 | 0 | 6,400 | 10,000 | 0 | (16,400) |
| 1975 | 0 | 520 | 0 | 0 | 0 | 0 | 7,000 | 11,000 | 0 | (18,000) |
| 1976 | 0 | 589 | 0 | 0 | 0 | 0 | 7,600 | 12,000 | 0 | (19,600) |
| 1977 | 0 | 111 | 0 | 0 | 0 | 0 | 0 | 0 | 22 | 0 |
| 1978 | 0 | 208 | 0 | 0 | 0 | 0 | 10,084 | 15,300 | 0 | (25,384) |
| 1979 | 0 | 133 | 0 | 0 | 0 | 0 | 10,063 | 15,000 | 4,000 | (25,063) |
| 1980 | 0 | 191 | 0 | 3 | 0 | 0 | 10,884 | 17,000 | 4,000 | (27,884) |
| 1981 | 0 | 1,270 | 0 | 46 | 0 | 0 | 12,105 | 19,000 | 4,000 | (31,105) |
| 1982 | 0 | 0 | 0 | 174 | 0 | 0 | 13,326 | 21,000 | 10,500 | (34,326) |
| 1983 | 0 | 38 | 0 | 268 | 0 | 0 | 14,547 | 23,000 | 0 | (37,547) |
| 1984 | 0 | 1 | 0 | 550 | 0 | 0 | 15,768 | 25,000 | 0 | (40,768) |
| 1985 | 0 | 0 | 16 | 1,786 | 0 | 0 | 16,989 | 27,000 | 0 | (43,989) |
| 1986 | 0 | 163 | 10 | 1,735 | 0 | 0 | 18,210 | 29,000 | 0 | (47,210) |
| 1987 | 0 | 1,080 | 1,366 | 2,273 | 5 | 214 | 19,431 | 31,500 | 17 | (50,931) |
| 1988 | 0 | 419 | 143 | 3,210 | 0 | 0 | 20,652 | 34,000 | 9 | (54,652) |
| 1989 | 0 | 971 | 780 | 3,591 | 0 | 89 | 21,873 | 36,500 | 0 | (58,373) |
| 1990 | 0 | 1,747 | 34 | 3,988 | 0 | 10 | 23,100 | 38,100 | 0 | (61,200) |
| 1991 | 0 | 522 | 0 | 2,427 | 0 | 0 | 6,930 | 11,430 | 0 | (18,360) |
| 1992 | 0 | 251 | 0 | 3,859 | 0 | 0 | 10,427 | 17,197 | 42 | (27,624) |
| 1993 | 0 | 734 | 0 | 5,098 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1994 | 0 | 1,098 | 0 | 4,657 | 0 | 0 | 0 | 0 | 14,634 | 0 |
| 1995 | 0 | 480 | 0 | 4,679 | 0 | 0 | 0 | 0 | 7,495 | 0 |
| 1996 | 0 | 494 | 0 | 5,458 | 0 | 0 | 0 | 0 | 6,111 | 0 |
| 1997 | 0 | 444 | 0 | 5,549 | 0 | 0 | 0 | 0 | 9,038 | 0 |
| 1998 | 0 | 404 | 0 | 4,468 | 0 | 0 | 0 | 0 | 2,580 | 0 |
| 1999 | 0 | 342 | 0 | 5,684 | 0 | 0 | 0 | 0 | 6,705 | 0 |
| 2000 | 5,002 | 0 | 0 | 5,890 | 0 | 0 | 0 | 0 | 10,019 | 0 |
| 2001 | 0 | 0 | 0 | 4,989 | 0 | 0 | 0 | 0 | 3,048 | 0 |
| 2002 | 0 | 0 | 0 | 5,404 | 0 | 497 | 0 | 0 | 2,976 | 0 |
| 2003 | 0 | 0 | 0 | 6,063 | 0 | 0 | 0 | 0 | 13,150 | 7,625 |
| 2004 | 0 | 0 | 23 | 6,095 | 0 | 253 | 0 | 0 | 11,953 | 0 |
| 2005 | 0 | 0 | 34 | 5,184 | 0 | 0 | 0 | 0 | 12,169 | 5,942 |
| 2006 | 0 | 0 | 5 | 6,653 | 0 | 0 | 0 | 0 | 32,993 | 0 |
| 2007 | 0 | 0 | 25 | 7,711 | 0 | 588 | 0 | 0 | 27,684 | 0 |
| 2008 | 0 | 0 | 0 | 4,756 | 0 | 0 | 0 | 0 | 20,479 | 0 |
| 2009 | 0 | 0 | 0 | 4,185 | 0 | 0 | 0 | 0 | 20,214 | 0 |
| 2010 | 0 | 805 | 0 | 6,593 | 0 | 0 | 0 | 0 | 21,636 | 0 |
| 2011 | 0 | 2,300 | 0 | 6,021 | 0 | 0 | 0 | 0 | 81,480 | 0 |
| 2012 | 0 | 2,300 | 0 | 6,202 | 0 | 0 | 0 | 0 | 81,480 | 0 |
| 2013 | 0 | 2,300 | 0 | 6,388 | 0 | 0 | 0 | 0 | 81,480 | 0 |
| 2014 | 0 | 2,300 | 0 | 6,580 | 0 | 0 | 0 | 0 | 80,480 | 0 |
| 2015 | 0 | 2,300 | 0 | 6,580 | 0 | 0 | 0 | 0 | 84,480 | 0 |
| 2016 | 0 | 2,300 | 0 | 6,777 | 0 | 0 | 0 | 0 | 84,480 | 0 |
| 2017 | 0 | 2,300 | 0 | 6,981 | 0 | 0 | 0 | 0 | 84,480 | 0 |
| 2018 | 0 | 2,300 | 0 | 7,190 | 0 | 0 | 0 | 0 | 84,480 | 0 |
| 2019 | 0 | 2,300 | 0 | 7,404 | 0 | 0 | 0 | 0 | 84,480 | 0 |
| 2020 | 0 | 2,300 | 0 | 7,628 | 0 | 0 | 0 | 0 | 85,182 | 0 |
| 2021 | 0 | 2,300 | 0 | 11,652 | 0 | 0 | 0 | 0 | 85,182 | 0 |
| 2022 | 0 | 2,300 | 0 | 11,652 | 0 | 0 | 0 | 0 | 85,182 | 0 |
| 2023 | 0 | 2,300 | 0 | 11,652 | 0 | 0 | 0 | 0 | 85,182 | 0 |
| 2024 | 0 | 2,300 | 0 | 11,652 | 0 | 0 | 0 | 0 | 85,182 | 0 |
| 2025 | 0 | 2,300 | 0 | 11,652 | 0 | 0 | 0 | 0 | 85,182 | 0 |
| 2026 | 0 | 2,300 | 0 | 11,652 | 0 | 0 | 0 | 0 | 85,182 | 0 |
| 2027 | 0 | 2,300 | 0 | 11,652 | 0 | 0 | 0 | 0 | 85,182 | 0 |
| 2028 | 0 | 2,300 | 0 | 11,652 | 0 | 0 | 0 | 0 | 85,182 | 0 |
| 2029 | 0 | 2,300 | 0 | 11,652 | 0 | 0 | 0 | 0 | 85,182 | 0 |
| 2030 | 0 | 2,300 | 0 | 11,652 | 0 | 0 | 0 | 0 | 85,182 | 0 |
| 2031 | 0 | 2,300 | 0 | 11,652 | 0 | 0 | 0 | 0 | 85,182 | 0 |
| 2032 | 0 | 2,300 | 0 | 11,652 | 0 | 0 | 0 | 0 | 85,182 | 0 |
| 2033 | 0 | 2,300 | 0 | 11,652 | 0 | 0 | 0 | 0 | 85,182 | 0 |
| 2034 | 0 | 2,300 | 0 | 11,652 | 0 | 0 | 0 | 0 | 85,182 | 0 |
| 2035 | 0 | 2,300 | 0 | 11,652 | 0 | 0 | 0 | 0 | 85,182 | 0 |
| TOTAL | 5,002 | 71,543 | 2,436 | 365,557 | 5 | 1,651 | 251,189 | 402,027 | 2,355,761 | (639,649) |

(d) 1988 advance allocation.

(e) In accordance with the Exchange Agreement between the noted agencies, MWDSC assumed responsibility for payment of variable OMP&R costs on the exchange water in reaches beyond Reach 22B, and Desert Water Agency and Coachella Valley Water District for such costs from the Delta through Reach 22B. The adjustment in deliveries in Reach 22B provides for compliance with provisions for the repayment of costs under the agreement. In 1993 and after the exchange takes place in Reach 26A.

**TABLE B-5A. Annual Water Quantities Delivered from
Each Aqueduct Reach to Each Contractor**

(in acre-feet)

Sheet 14 of 18

| Calendar Year | CALIFORNIA AQUEDUCT (continued) | | | | | | | | |
|------------------|---------------------------------|----------|---------|---------|-----------|--------|--------------------|-----------|------------|
| | MOJAVE DIVISION (continued) | | | | | | SANTA ANA DIVISION | | |
| | Reach 23 | Reach 24 | | | | | Reach 26A | | |
| | MWA | CVWD | CLAWA | MWA | MWDSC (e) | SBVMWD | CVWD(e) | DWA(e) | MWDSC (e) |
| | [135] | [136] | [137] | [138] | [139] | [140] | [141] | [142] | [143] |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1968 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1969 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1970 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1972 | 0 | 0 | 464 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1973 | 0 | 0 | 389 | 0 | 0 | 0 | 0 | 0 | 444 |
| 1974 | 14 | 0 | 627 | 0 | 0 | 0 | 0 | 0 | 84,981 |
| 1975 | 0 | 0 | 825 | 0 | 0 | 0 | 0 | 0 | 169,960 |
| 1976 | 0 | 0 | 1,002 | 0 | 0 | 0 | 0 | 0 | 215,312 |
| 1977 | 58 | 0 | 1,109 | 0 | 0 | 0 | 0 | 0 | 64,823 |
| 1978 | 0 | 0 | 1,209 | 0 | 0 | 0 | 0 | 0 | 287,708 |
| 1979 | 0 | 0 | 1,260 | 0 | 0 | 0 | 0 | 0 | 260,903 |
| 1980 | 0 | 0 | 1,239 | 0 | 0 | 0 | 0 | 0 | 300,345 |
| 1981 | 0 | 0 | 1,485 | 0 | 0 | 0 | 0 | 0 | 395,678 |
| 1982 | 0 | 0 | 1,238 | 0 | 0 | 0 | 0 | 0 | 214,566 |
| 1983 | 0 | 0 | 911 | 0 | 0 | 0 | 0 | 0 | 175,288 |
| 1984 | 0 | 0 | 1,128 | 0 | 0 | 0 | 0 | 0 | 122,311 |
| 1985 | 0 | 0 | 1,422 | 0 | 0 | 0 | 0 | 0 | 147,599 |
| 1986 | 0 | 0 | 1,506 | 0 | 0 | 0 | 0 | 0 | 215,265 |
| 1987 | 0 | 0 | 1,849 | 0 | 0 | 0 | 0 | 0 | 175,012 |
| 1988 | 0 | 0 | 2,006 | 0 | 0 | 0 | 0 | 0 | 247,101 |
| 1989 | 200 | 0 | 2,170 | 0 | 0 | 0 | 0 | 0 | 326,217 |
| 1990 | 0 | 0 | 1,827 | 0 | 0 | 0 | 0 | 0 | 399,387 |
| 1991 | 0 | 0 | 849 | 2,032 | 0 | 0 | 0 | 0 | 107,182 |
| 1992 | 0 | 0 | 519 | 9,334 | 0 | 0 | 0 | 0 | 219,524 |
| 1993 | 0 | 0 | 439 | 10,000 | 0 | 0 | 23,100 | 38,100 | 98,291 |
| 1994 | 0 | 0 | 785 | 819 | 0 | 0 | 14,102 | 23,257 | 192,979 |
| 1995 | 0 | 0 | 409 | 0 | 0 | 0 | 23,100 | 38,100 | 107,299 |
| 1996 | 0 | 0 | 485 | 0 | 0 | 0 | 62,219 | 102,622 | 73,438 |
| 1997 | 0 | 0 | 651 | 0 | 0 | 0 | 58,100 | 53,100 | 157,215 |
| 1998 | 0 | 0 | 187 | 0 | 0 | 0 | 78,100 | 58,100 | 36,770 |
| 1999 | 0 | 0 | 1,132 | 0 | 0 | 0 | 50,480 | 58,100 | 139,752 |
| 2000 | 0 | 1,194 | 0 | 0 | 0 | 0 | 42,323 | 58,234 | 326,647 |
| 2001 | 0 | 0 | 1,057 | 0 | 0 | 0 | 9,100 | 15,010 | 284,007 |
| 2002 | 0 | 0 | 2,189 | 0 | 0 | 0 | 16,755 | 27,640 | 301,700 |
| 2003 | 0 | 0 | 1,563 | 0 | 17,249 | 0 | 14,443 | 23,819 | 464,719 |
| 2004 | 0 | 0 | 2,006 | 0 | 0 | 0 | 15,465 | 21,190 | 428,316 |
| 2005 | 0 | 0 | 807 | 341 | 14,058 | 0 | 34,356 | 49,089 | 361,976 |
| 2006 | 0 | 0 | 641 | 0 | 0 | 0 | 121,100 | 50,000 | 404,594 |
| 2007 | 0 | 0 | 1,768 | 17,249 | 0 | 710 | 66,007 | 27,253 | 370,971 |
| 2008 | 0 | 0 | 848 | 3,679 | 0 | 411 | 40,171 | 24,643 | 210,520 |
| 2009 | 0 | 0 | 899 | 7,488 | 0 | 149 | 45,074 | 17,872 | 138,216 |
| 2010 | 0 | 0 | 3,480 | 0 | 0 | 280 | 36,718 | 16,871 | 93,020 |
| 2011 | 0 | 0 | 3,340 | 0 | 0 | 600 | 69,175 | 27,875 | 556,159 |
| 2012 | 0 | 0 | 3,460 | 0 | 0 | 600 | 69,175 | 27,875 | 556,159 |
| 2013 | 0 | 0 | 3,600 | 0 | 0 | 600 | 69,175 | 27,875 | 556,159 |
| 2014 | 0 | 0 | 3,720 | 0 | 0 | 600 | 69,175 | 27,875 | 556,159 |
| 2015 | 0 | 0 | 5,800 | 0 | 0 | 600 | 138,350 | 55,750 | 556,159 |
| 2016 | 0 | 0 | 5,800 | 0 | 0 | 0 | 138,350 | 55,750 | 556,159 |
| 2017 | 0 | 0 | 5,800 | 0 | 0 | 0 | 138,350 | 55,750 | 556,159 |
| 2018 | 0 | 0 | 5,800 | 0 | 0 | 0 | 138,350 | 55,750 | 556,159 |
| 2019 | 0 | 0 | 5,800 | 0 | 0 | 0 | 138,350 | 55,750 | 556,159 |
| 2020 | 0 | 0 | 5,800 | 3,298 | 0 | 0 | 138,350 | 55,750 | 556,159 |
| 2021 | 0 | 0 | 5,800 | 3,298 | 0 | 0 | 138,350 | 55,750 | 556,159 |
| 2022 | 0 | 0 | 5,800 | 3,298 | 0 | 0 | 138,350 | 55,750 | 556,159 |
| 2023 | 0 | 0 | 5,800 | 3,298 | 0 | 0 | 138,350 | 55,750 | 556,159 |
| 2024 | 0 | 0 | 5,800 | 3,298 | 0 | 0 | 138,350 | 55,750 | 556,159 |
| 2025 | 0 | 0 | 5,800 | 3,298 | 0 | 0 | 138,350 | 55,750 | 556,159 |
| 2026 | 0 | 0 | 5,800 | 3,298 | 0 | 0 | 138,350 | 55,750 | 556,159 |
| 2027 | 0 | 0 | 5,800 | 3,298 | 0 | 0 | 138,350 | 55,750 | 556,159 |
| 2028 | 0 | 0 | 5,800 | 3,298 | 0 | 0 | 138,350 | 55,750 | 556,159 |
| 2029 | 0 | 0 | 5,800 | 3,298 | 0 | 0 | 138,350 | 55,750 | 556,159 |
| 2030 | 0 | 0 | 5,800 | 3,298 | 0 | 0 | 138,350 | 55,750 | 556,159 |
| 2031 | 0 | 0 | 5,800 | 3,298 | 0 | 0 | 138,350 | 55,750 | 556,159 |
| 2032 | 0 | 0 | 5,800 | 3,298 | 0 | 0 | 138,350 | 55,750 | 556,159 |
| 2033 | 0 | 0 | 5,800 | 3,298 | 0 | 0 | 138,350 | 55,750 | 556,159 |
| 2034 | 0 | 0 | 5,800 | 3,298 | 0 | 0 | 138,350 | 55,750 | 556,159 |
| 2035 | 0 | 0 | 5,800 | 3,298 | 0 | 0 | 138,350 | 55,750 | 556,159 |
| TOTAL | 272 | 1,194 | 180,300 | 103,710 | 31,307 | 4,550 | 3,932,763 | 1,985,250 | 22,234,011 |

**TABLE B-5A. Annual Water Quantities Delivered from
Each Aqueduct Reach to Each Contractor**

(in acre-feet)

Sheet 15 of 18

| Calendar Year | CALIFORNIA AQUEDUCT (continued) | | | | | | | | | |
|------------------|---------------------------------|-------|---------|-----------|-----------|--------|-----------|-----------|-------|-----------|
| | SANTA ANA DIVISION (continued) | | | | | | | | | |
| | Reach 26A | | | Reach 28G | Reach 28H | | | Reach 28J | | |
| | SBVMWD (f) | MWA | SGVMWD | MWDSC | CVWD | DWA | MWDSC | CVWD | DWA | MWDSC |
| | [144] | [145] | [146] | [147] | [148] | [149] | [150] | [151] | [152] | [153] |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1968 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1969 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1970 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1972 | 1,275 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1973 | 32,426 | 0 | 0 | 18,942 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1974 | 16,605 | 0 | 612 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1975 | 13,865 | 0 | 5,450 | 0 | 0 | 0 | 0 | 0 | 0 | 251 |
| 1976 | 12,273 | 0 | 6,071 | 0 | 0 | 0 | 55 | 0 | 0 | 2,000 |
| 1977 | 24,833 | 0 | 8,996 | 0 | 0 | 0 | 43 | 0 | 0 | 2,442 |
| 1978 | 4,055 | 0 | 7,771 | 0 | 0 | 0 | 48 | 0 | 0 | 64,054 |
| 1979 | 18 | 0 | 290 | 0 | 0 | 0 | 1,290 | 0 | 0 | 94,353 |
| 1980 | 0 | 0 | 1,085 | 0 | 0 | 0 | 3,013 | 0 | 0 | 91,532 |
| 1981 | 16,021 | 0 | 3,619 | 0 | 0 | 0 | 4,365 | 0 | 0 | 149,405 |
| 1982 | 8,409 | 0 | 12,599 | 0 | 0 | 0 | 3,961 | 0 | 0 | 155,629 |
| 1983 | 5,994 | 0 | 734 | 0 | 0 | 0 | 6,645 | 0 | 0 | 41,616 |
| 1984 | 5,556 | 0 | 7,656 | 0 | 0 | 0 | 109,743 | 0 | 0 | 5,672 |
| 1985 | 7,390 | 0 | 5,028 | 0 | 0 | 0 | 182,781 | 0 | 0 | 6,538 |
| 1986 | 6,421 | 0 | 9,454 | 0 | 0 | 0 | 131,439 | 0 | 0 | 30,071 |
| 1987 | 18,751 | 0 | 10,630 | 0 | 0 | 0 | 144,743 | 0 | 0 | 26,315 |
| 1988 | 21,386 | 0 | 8,948 | 0 | 0 | 0 | 199,641 | 0 | 0 | 22,209 |
| 1989 | 20,782 | 0 | 12,839 | 0 | 0 | 0 | 247,430 | 0 | 0 | 51,462 |
| 1990 | 18,831 | 0 | 16,649 | 0 | 0 | 0 | 257,796 | 0 | 0 | 36,060 |
| 1991 | 3,661 | 0 | 5,399 | 0 | 0 | 0 | 38,832 | 0 | 0 | 5,958 |
| 1992 | 3,358 | 0 | 7,908 | 0 | 0 | 0 | 85,341 | 0 | 0 | 12,223 |
| 1993 | 4,361 | 0 | 14,397 | 0 | 0 | 0 | 61,841 | 0 | 0 | 4,588 |
| 1994 | 9,135 | 0 | 15,230 | 0 | 0 | 0 | 134,262 | 0 | 0 | 4,725 |
| 1995 | 696 | 0 | 12,922 | 0 | 0 | 0 | 117,762 | 0 | 0 | 21,099 |
| 1996 | 6,064 | 0 | 15,989 | 0 | 0 | 0 | 144,906 | 0 | 0 | 12,418 |
| 1997 | 9,654 | 0 | 18,175 | 0 | 0 | 0 | 107,853 | 0 | 0 | 47,777 |
| 1998 | 1,878 | 0 | 9,310 | 0 | 6,582 | 7,708 | 77,473 | 1,027 | 4,839 | 50,411 |
| 1999 | 12,874 | 0 | 21,729 | 0 | 0 | 0 | 206,689 | 0 | 0 | 8,163 |
| 2000 | 0 | 0 | 0 | 0 | 0 | 0 | 379,713 | 0 | 0 | 7,864 |
| 2001 | 0 | 0 | 0 | 0 | 0 | 0 | 260,984 | 0 | 0 | 33,414 |
| 2002 | 26,399 | 0 | 0 | 0 | 0 | 0 | 340,635 | 0 | 0 | 41,552 |
| 2003 | 5,000 | 0 | 0 | 0 | 0 | 0 | 246,485 | 0 | 0 | 50,776 |
| 2004 | 40,000 | 0 | 0 | 0 | 0 | 0 | 357,995 | 0 | 0 | 20,437 |
| 2005 | 15,834 | 0 | 0 | 0 | 0 | 0 | 242,245 | 0 | 0 | 114,499 |
| 2006 | 20,000 | 0 | 0 | 0 | 0 | 0 | 342,734 | 0 | 0 | 32,242 |
| 2007 | 10,022 | 0 | 0 | 0 | 7,221 | 2,981 | 271,874 | 0 | 0 | 48,923 |
| 2008 | 187 | 0 | 0 | 0 | 6,620 | 1,785 | 175,460 | 0 | 0 | 10,432 |
| 2009 | 0 | 0 | 0 | 0 | 948 | 391 | 126,265 | 0 | 0 | 5,849 |
| 2010 | 0 | 2,799 | 0 | 0 | 16,693 | 5,777 | 89,248 | 2,607 | 0 | 20,387 |
| 2011 | 0 | 0 | 0 | 0 | 0 | 0 | 111,760 | 0 | 0 | 194,800 |
| 2012 | 0 | 0 | 0 | 0 | 0 | 0 | 111,760 | 0 | 0 | 194,800 |
| 2013 | 0 | 0 | 0 | 0 | 0 | 0 | 111,760 | 0 | 0 | 194,800 |
| 2014 | 0 | 0 | 0 | 0 | 0 | 0 | 111,760 | 0 | 0 | 194,800 |
| 2015 | 0 | 0 | 0 | 0 | 0 | 0 | 111,760 | 0 | 0 | 194,800 |
| 2016 | 0 | 0 | 0 | 0 | 0 | 0 | 111,760 | 0 | 0 | 194,800 |
| 2017 | 0 | 0 | 0 | 0 | 0 | 0 | 111,760 | 0 | 0 | 194,800 |
| 2018 | 0 | 0 | 0 | 0 | 0 | 0 | 111,760 | 0 | 0 | 194,800 |
| 2019 | 0 | 0 | 0 | 0 | 0 | 0 | 111,760 | 0 | 0 | 194,800 |
| 2020 | 0 | 0 | 0 | 0 | 0 | 0 | 111,760 | 0 | 0 | 194,800 |
| 2021 | 0 | 0 | 0 | 0 | 0 | 0 | 111,760 | 0 | 0 | 194,800 |
| 2022 | 0 | 0 | 0 | 0 | 0 | 0 | 111,760 | 0 | 0 | 194,800 |
| 2023 | 0 | 0 | 0 | 0 | 0 | 0 | 111,760 | 0 | 0 | 194,800 |
| 2024 | 0 | 0 | 0 | 0 | 0 | 0 | 111,760 | 0 | 0 | 194,800 |
| 2025 | 0 | 0 | 0 | 0 | 0 | 0 | 111,760 | 0 | 0 | 194,800 |
| 2026 | 0 | 0 | 0 | 0 | 0 | 0 | 111,760 | 0 | 0 | 194,800 |
| 2027 | 0 | 0 | 0 | 0 | 0 | 0 | 111,760 | 0 | 0 | 194,800 |
| 2028 | 0 | 0 | 0 | 0 | 0 | 0 | 111,760 | 0 | 0 | 194,800 |
| 2029 | 0 | 0 | 0 | 0 | 0 | 0 | 111,760 | 0 | 0 | 194,800 |
| 2030 | 0 | 0 | 0 | 0 | 0 | 0 | 111,760 | 0 | 0 | 194,800 |
| 2031 | 0 | 0 | 0 | 0 | 0 | 0 | 111,760 | 0 | 0 | 194,800 |
| 2032 | 0 | 0 | 0 | 0 | 0 | 0 | 111,760 | 0 | 0 | 194,800 |
| 2033 | 0 | 0 | 0 | 0 | 0 | 0 | 111,760 | 0 | 0 | 194,800 |
| 2034 | 0 | 0 | 0 | 0 | 0 | 0 | 111,760 | 0 | 0 | 194,800 |
| 2035 | 0 | 0 | 0 | 0 | 0 | 0 | 111,760 | 0 | 0 | 194,800 |
| TOTAL | 404,014 | 2,799 | 239,490 | 18,942 | 38,064 | 18,642 | 7,895,590 | 3,634 | 4,839 | 6,203,346 |

(f) Includes 1,650 AF recaptured from ground water storage in 1982, 10,000 AF in 1987, and 8,749 AF in 1988. This was water stored under DWR's Ground Water Demonstration Program.

**TABLE B-5A. Annual Water Quantities Delivered from
Each Aqueduct Reach to Each Contractor**

(in acre-feet)

Sheet 16 of 18

| Calendar Year | CALIFORNIA AQUEDUCT (continued) | | | | | | | |
|------------------|---------------------------------|---------|-----------|---------|-------------|-------------|-------------|---------------|
| | SANTA ANA DIVISION (continued) | | | | | | | |
| | Reach EBX1 | | | | Reach EBX2C | Reach EBX3A | Reach EBX4B | Reach EBX4B-G |
| | CVWD | MWDSC | SBVMWD | SGPWD | SBVMWD | SBVMWD | SGPWD | SGPWD |
| | [154] | [155] | [156] | [157] | [158] | [159] | [160] | [161] |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1968 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1969 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1970 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1972 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1973 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1974 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1975 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1976 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1977 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1978 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1979 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1980 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1981 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1982 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1983 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1984 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1985 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1986 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1987 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1988 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1989 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1990 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1991 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1992 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1993 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1994 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1995 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1996 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1997 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1998 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1999 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2000 | 0 | 5,466 | 18,399 | 15,140 | 0 | 0 | 0 | 0 |
| 2001 | 0 | 0 | 26,488 | 2,360 | 0 | 0 | 0 | 0 |
| 2002 | 0 | 1,427 | 37,069 | 24,851 | 0 | 0 | 0 | 0 |
| 2003 | 0 | 74,496 | 16,703 | 21,934 | 1,793 | 2,617 | 116 | 0 |
| 2004 | 0 | 120,338 | 13,229 | 12,541 | 1,430 | 2,371 | 841 | 0 |
| 2005 | 8,163 | 153,700 | 12,715 | 13,984 | 966 | 2,035 | 692 | 0 |
| 2006 | 0 | 147,432 | 11,832 | 16,284 | 885 | 2,614 | 807 | 3,471 |
| 2007 | 0 | 94,208 | 38,151 | 4,024 | 3,130 | 5,103 | 177 | 3,758 |
| 2008 | 0 | 16,745 | 25,038 | 7,212 | 686 | 8,823 | 1,042 | 3,862 |
| 2009 | 0 | 18,314 | 25,041 | 11,520 | 4,090 | 10,066 | 1,898 | 4,499 |
| 2010 | 0 | 0 | 46,822 | 10,080 | 0 | 0 | 1 | 7,016 |
| 2011 | 0 | 0 | 102,000 | 16,000 | 0 | 0 | 0 | 9,300 |
| 2012 | 0 | 0 | 102,000 | 12,000 | 0 | 0 | 0 | 9,800 |
| 2013 | 0 | 0 | 102,000 | 12,000 | 0 | 0 | 0 | 11,800 |
| 2014 | 0 | 0 | 102,000 | 28,800 | 0 | 0 | 0 | 15,300 |
| 2015 | 0 | 0 | 102,000 | 28,800 | 0 | 0 | 0 | 17,300 |
| 2016 | 0 | 0 | 102,600 | 28,800 | 0 | 0 | 0 | 17,300 |
| 2017 | 0 | 0 | 102,600 | 28,800 | 0 | 0 | 0 | 17,300 |
| 2018 | 0 | 0 | 102,600 | 28,800 | 0 | 0 | 0 | 17,300 |
| 2019 | 0 | 0 | 102,600 | 28,800 | 0 | 0 | 0 | 17,300 |
| 2020 | 0 | 0 | 102,600 | 28,800 | 0 | 0 | 0 | 17,300 |
| 2021 | 0 | 0 | 102,600 | 28,800 | 0 | 0 | 0 | 17,300 |
| 2022 | 0 | 0 | 102,600 | 28,800 | 0 | 0 | 0 | 17,300 |
| 2023 | 0 | 0 | 102,600 | 28,800 | 0 | 0 | 0 | 17,300 |
| 2024 | 0 | 0 | 102,600 | 28,800 | 0 | 0 | 0 | 17,300 |
| 2025 | 0 | 0 | 102,600 | 28,800 | 0 | 0 | 0 | 17,300 |
| 2026 | 0 | 0 | 102,600 | 28,800 | 0 | 0 | 0 | 17,300 |
| 2027 | 0 | 0 | 102,600 | 28,800 | 0 | 0 | 0 | 17,300 |
| 2028 | 0 | 0 | 102,600 | 28,800 | 0 | 0 | 0 | 17,300 |
| 2029 | 0 | 0 | 102,600 | 28,800 | 0 | 0 | 0 | 17,300 |
| 2030 | 0 | 0 | 102,600 | 28,800 | 0 | 0 | 0 | 17,300 |
| 2031 | 0 | 0 | 102,600 | 28,800 | 0 | 0 | 0 | 17,300 |
| 2032 | 0 | 0 | 102,600 | 28,800 | 0 | 0 | 0 | 17,300 |
| 2033 | 0 | 0 | 102,600 | 28,800 | 0 | 0 | 0 | 17,300 |
| 2034 | 0 | 0 | 102,600 | 28,800 | 0 | 0 | 0 | 17,300 |
| 2035 | 0 | 0 | 102,600 | 28,800 | 0 | 0 | 0 | 17,300 |
| TOTAL | 8,163 | 632,126 | 2,833,487 | 813,530 | 12,980 | 33,629 | 5,574 | 432,106 |

**TABLE B-5A. Annual Water Quantities Delivered from
Each Aqueduct Reach to Each Contractor**

(in acre-feet)

Sheet 17 of 18

| Calendar Year | CALIFORNIA AQUEDUCT (continued) | | | | | | | | | |
|------------------|---------------------------------|-----------|---------|-----------|--------|--------|------------|--------|---------------|---------|
| | WEST BRANCH | | | | | | | | | |
| | Reach 29F | Reach 29H | | Reach 30 | | | | | | |
| | AVEKWA | CLWA | VCFC | CLWA | CVWD | DWA | MWDSC (g) | SBVMWD | SBC FC&WCD | VCFC |
| | [162] | [163] | [164] | [165] | [166] | [167] | [168] | [169] | [170] | [171] |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1968 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1969 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1970 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1972 | 53 | 0 | 0 | 0 | 0 | 0 | 71,938 | 0 | 0 | 0 |
| 1973 | 20 | 0 | 0 | 0 | 0 | 0 | 155,297 | 0 | 0 | 0 |
| 1974 | 36 | 0 | 0 | 0 | 0 | 0 | 209,136 | 0 | 0 | 0 |
| 1975 | 26 | 0 | 0 | 0 | 0 | 0 | 374,280 | 0 | 0 | 0 |
| 1976 | 24 | 0 | 0 | 0 | 0 | 0 | 420,684 | 0 | 0 | 0 |
| 1977 | 0 | 0 | 0 | 0 | 0 | 0 | 122,447 | 0 | 0 | 0 |
| 1978 | 0 | 0 | 0 | 0 | 0 | 0 | 171,139 | 0 | 0 | 0 |
| 1979 | 0 | 0 | 0 | 0 | 0 | 0 | 145,591 | 0 | 0 | 0 |
| 1980 | 0 | 0 | 0 | 1,210 | 0 | 0 | 164,721 | 0 | 0 | 0 |
| 1981 | 0 | 0 | 0 | 5,761 | 0 | 0 | 277,503 | 0 | 0 | 0 |
| 1982 | 0 | 0 | 0 | 9,516 | 0 | 0 | 351,362 | 0 | 0 | 0 |
| 1983 | 0 | 0 | 0 | 9,476 | 0 | 0 | 157,519 | 0 | 0 | 0 |
| 1984 | 0 | 0 | 0 | 11,477 | 0 | 0 | 260,624 | 0 | 0 | 0 |
| 1985 | 0 | 0 | 0 | 12,401 | 0 | 0 | 390,696 | 0 | 0 | 0 |
| 1986 | 0 | 0 | 0 | 13,928 | 0 | 0 | 379,275 | 0 | 0 | 0 |
| 1987 | 0 | 0 | 0 | 16,167 | 0 | 0 | 417,285 | 0 | 0 | 0 |
| 1988 | 0 | 0 | 0 | 18,904 | 0 | 0 | 488,265 | 0 | 0 | 0 |
| 1989 | 0 | 0 | 0 | 21,719 | 0 | 0 | 589,962 | 0 | 0 | 0 |
| 1990 | 0 | 0 | 4,836 | 22,139 | 0 | 0 | 764,380 | 0 | 0 | 0 |
| 1991 | 0 | 0 | 988 | 3,846 | 0 | 0 | 257,835 | 0 | 1,240 | 0 |
| 1992 | 0 | 0 | 0 | 14,812 | 0 | 0 | 420,849 | 0 | 0 | 0 |
| 1993 | 6 | 0 | 0 | 13,787 | 0 | 0 | 437,470 | 0 | 0 | 0 |
| 1994 | 0 | 0 | 0 | 14,919 | 0 | 0 | 475,900 | 0 | 0 | 0 |
| 1995 | 0 | 0 | 0 | 17,747 | 0 | 0 | 139,882 | 0 | 0 | 0 |
| 1996 | 0 | 0 | 0 | 18,448 | 0 | 0 | 267,618 | 0 | 0 | 0 |
| 1997 | 11 | 0 | 0 | 22,842 | 10,240 | 16,890 | 271,379 | 0 | 0 | 1,850 |
| 1998 | 7 | 0 | 0 | 19,782 | 0 | 0 | 187,277 | 0 | 0 | 1,850 |
| 1999 | 0 | 0 | 0 | 28,813 | 0 | 0 | 327,001 | 0 | 0 | 1,850 |
| 2000 | 0 | 0 | 2,200 | 31,085 | 0 | 0 | 632,991 | 0 | 0 | 1,850 |
| 2001 | 0 | 0 | 0 | 30,701 | 0 | 0 | 444,764 | 0 | 0 | 1,850 |
| 2002 | 0 | 0 | 3,148 | 42,080 | 0 | 0 | 723,605 | 8,601 | 0 | 1,850 |
| 2003 | 0 | 6,768 | 3,150 | 44,967 | 0 | 0 | 678,964 | 0 | 0 | 1,850 |
| 2004 | 0 | 0 | 4,047 | 47,463 | 0 | 0 | 797,294 | 0 | 0 | 1,203 |
| 2005 | 0 | 0 | 0 | 36,747 | 0 | 0 | 538,839 | 0 | 0 | 1,665 |
| 2006 | 0 | 0 | 0 | 40,017 | 0 | 0 | 574,679 | 0 | 0 | 1,850 |
| 2007 | 0 | 0 | 1,890 | 45,919 | 0 | 0 | 711,831 | 0 | 0 | 1,110 |
| 2008 | 0 | 0 | 1,980 | 42,878 | 0 | 0 | 485,156 | 0 | 0 | 1,818 |
| 2009 | 0 | 0 | 3,150 | 38,784 | 0 | 0 | 589,294 | 0 | 0 | 741 |
| 2010 | 0 | 0 | 1,106 | 33,320 | 0 | 0 | 427,498 | 0 | 0 | 5,867 |
| 2011 | 0 | 0 | 3,150 | 30,800 | 0 | 0 | 819,062 | 0 | 0 | 15,850 |
| 2012 | 0 | 0 | 3,150 | 31,400 | 0 | 0 | 819,062 | 0 | 0 | 15,850 |
| 2013 | 0 | 0 | 3,150 | 32,000 | 0 | 0 | 819,062 | 0 | 0 | 15,850 |
| 2014 | 0 | 0 | 3,150 | 36,000 | 0 | 0 | 819,062 | 0 | 0 | 15,850 |
| 2015 | 0 | 0 | 3,150 | 95,200 | 0 | 0 | 1,019,062 | 0 | 0 | 16,850 |
| 2016 | 0 | 0 | 3,150 | 95,200 | 0 | 0 | 1,019,062 | 0 | 0 | 16,850 |
| 2017 | 0 | 0 | 3,150 | 95,200 | 0 | 0 | 1,019,062 | 0 | 0 | 16,850 |
| 2018 | 0 | 0 | 3,150 | 95,200 | 0 | 0 | 1,019,062 | 0 | 0 | 16,850 |
| 2019 | 0 | 0 | 3,150 | 95,200 | 0 | 0 | 1,019,062 | 0 | 0 | 16,850 |
| 2020 | 0 | 0 | 3,150 | 95,200 | 0 | 0 | 1,019,062 | 0 | 0 | 16,850 |
| 2021 | 0 | 0 | 3,150 | 95,200 | 0 | 0 | 1,019,062 | 0 | 0 | 16,850 |
| 2022 | 0 | 0 | 3,150 | 95,200 | 0 | 0 | 1,019,062 | 0 | 0 | 16,850 |
| 2023 | 0 | 0 | 3,150 | 95,200 | 0 | 0 | 1,019,062 | 0 | 0 | 16,850 |
| 2024 | 0 | 0 | 3,150 | 95,200 | 0 | 0 | 1,019,062 | 0 | 0 | 16,850 |
| 2025 | 0 | 0 | 3,150 | 95,200 | 0 | 0 | 1,019,062 | 0 | 0 | 16,850 |
| 2026 | 0 | 0 | 3,150 | 95,200 | 0 | 0 | 1,019,062 | 0 | 0 | 16,850 |
| 2027 | 0 | 0 | 3,150 | 95,200 | 0 | 0 | 1,019,062 | 0 | 0 | 16,850 |
| 2028 | 0 | 0 | 3,150 | 95,200 | 0 | 0 | 1,019,062 | 0 | 0 | 16,850 |
| 2029 | 0 | 0 | 3,150 | 95,200 | 0 | 0 | 1,019,062 | 0 | 0 | 16,850 |
| 2030 | 0 | 0 | 3,150 | 95,200 | 0 | 0 | 1,019,062 | 0 | 0 | 16,850 |
| 2031 | 0 | 0 | 3,150 | 95,200 | 0 | 0 | 1,019,062 | 0 | 0 | 16,850 |
| 2032 | 0 | 0 | 3,150 | 95,200 | 0 | 0 | 1,019,062 | 0 | 0 | 16,850 |
| 2033 | 0 | 0 | 3,150 | 95,200 | 0 | 0 | 1,019,062 | 0 | 0 | 16,850 |
| 2034 | 0 | 0 | 3,150 | 95,200 | 0 | 0 | 1,019,062 | 0 | 0 | 16,850 |
| 2035 | 0 | 0 | 3,150 | 95,200 | 0 | 0 | 1,019,062 | 0 | 0 | 16,850 |
| TOTAL | 183 | 6,768 | 105,245 | 2,861,062 | 10,240 | 16,890 | 39,978,780 | 8,601 | 1,240 | 444,454 |

(g) Deliveries exclude 6,171 AF of 1982 exchange water.

**TABLE B-5A. Annual Water Quantities Delivered from
Each Aqueduct Reach to Each Contractor**

(in acre-feet)

Sheet 18 of 18

| Calendar Year | CALIFORNIA AQUEDUCT (continued) | | | | | | | TOTAL | GRAND TOTAL |
|----------------------|---------------------------------|-------|-----------|--------|-----------|----------------|---------------|-------------|--------------------|
| | COASTAL BRANCH | | | | | | | | |
| | Reach 31A | | | | Reach 33A | | | | |
| | CLWA | DRWD | KCWA | | CK | SLOC FC&WCD | SBC FC&WCD | | |
| | | | (AG) | (M&I) | | | | | |
| | [172] | [173] | [174] | [175] | [176] | [175] | [176] | [177] | [178] |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8,906 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12,645 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20,911 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 34,026 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 54,913 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 56,763 |
| 1968 | 7,382 | 0 | 71,657 | 0 | 0 | 0 | 0 | 192,188 | 294,457 |
| 1969 | 9,970 | 0 | 52,094 | 0 | 0 | 0 | 0 | 195,705 | 268,104 |
| 1970 | 11,739 | 0 | 71,910 | 0 | 0 | 0 | 0 | 276,211 | 369,459 |
| 1971 | 12,490 | 0 | 98,481 | 0 | 0 | 0 | 0 | 553,081 | 654,250 |
| 1972 | 13,905 | 0 | 107,850 | 0 | 0 | 0 | 0 | 895,006 | 1,037,584 |
| 1973 | 9,418 | 0 | 69,227 | 0 | 0 | 0 | 0 | 638,930 | 737,479 |
| 1974 | 9,700 | 0 | 68,474 | 0 | 0 | 0 | 0 | 783,984 | 878,820 |
| 1975 | 10,700 | 0 | 74,516 | 0 | 0 | 0 | 0 | 1,129,728 | 1,230,577 |
| 1976 | 11,700 | 0 | 78,358 | 0 | 0 | 0 | 0 | 1,245,662 | 1,379,597 |
| 1977 | 5,075 | 0 | 35,504 | 0 | 0 | 0 | 0 | 465,442 | 581,675 |
| 1978 | 11,362 | 0 | 81,242 | 0 | 0 | 0 | 0 | 1,339,268 | 1,458,154 |
| 1979 | 19,138 | 0 | 104,017 | 0 | 0 | 0 | 0 | 1,537,075 | 1,666,155 |
| 1980 | 13,882 | 0 | 97,497 | 0 | 0 | 0 | 0 | 1,413,363 | 1,536,189 |
| 1981 | 12,700 | 0 | 97,054 | 0 | 0 | 0 | 0 | 1,779,479 | 1,918,342 |
| 1982 | 12,700 | 0 | 83,076 | 0 | 0 | 0 | 0 | 1,641,571 | 1,750,528 |
| 1983 | 12,659 | 0 | 87,859 | 0 | 0 | 0 | 0 | 1,089,626 | 1,186,831 |
| 1984 | 12,741 | 0 | 119,098 | 0 | 0 | 0 | 0 | 1,489,814 | 1,591,131 |
| 1985 | 12,099 | 0 | 110,124 | 0 | 0 | 0 | 0 | 1,863,544 | 1,989,925 |
| 1986 | 13,301 | 0 | 118,298 | 0 | 0 | 0 | 0 | 1,882,290 | 1,998,514 |
| 1987 | 11,821 | 0 | 116,259 | 0 | 0 | 0 | 0 | 1,984,570 | 2,131,061 |
| 1988 | 11,534 | 0 | 109,435 | 0 | 0 | 0 | 0 | 2,221,538 | 2,384,434 |
| 1989 | 14,645 | 0 | 102,156 | 0 | 0 | 0 | 0 | 2,686,838 | 2,853,044 |
| 1990 | 6,440 | 0 | 103,362 | 0 | 0 | 0 | 0 | 2,398,121 | 2,581,277 |
| 1991 | 716 | 0 | 780 | 0 | 0 | 0 | 0 | 489,489 | 548,520 |
| 1992 | 5,887 | 0 | 73,748 | 0 | 0 | 0 | 0 | 1,374,775 | 1,470,695 |
| 1993 | 4,157 | 0 | 90,764 | 0 | 0 | 0 | 0 | 2,173,352 | 2,314,233 |
| 1994 | 9,422 | 0 | 77,536 | 200 | 0 | 0 | 0 | 1,727,504 | 1,860,612 |
| 1995 | 9,486 | 0 | 85,050 | 0 | 0 | 0 | 0 | 1,926,835 | 2,030,310 |
| 1996 | 14,052 | 0 | 100,578 | 0 | 0 | 0 | 0 | 2,429,928 | 2,542,395 |
| 1997 | 4,870 | 0 | 97,020 | 0 | 0 | 1,099 | 7,439 | 2,263,966 | 2,404,254 |
| 1998 | 311 | 0 | 86,879 | 0 | 0 | 3,592 | 18,618 | 1,657,381 | 1,763,382 |
| 1999 | 4,086 | 0 | 92,095 | 0 | 0 | 3,743 | 20,137 | 2,755,025 | 2,897,579 |
| 2000 | 8,395 | 0 | 85,215 | 0 | 0 | 3,962 | 22,741 | 3,390,079 | 3,567,585 |
| 2001 | 1,238 | 0 | 63,448 | 0 | 0 | 4,283 | 18,946 | 2,034,350 | 2,173,616 |
| 2002 | 2,737 | 0 | 65,055 | 0 | 0 | 4,355 | 27,636 | 2,738,943 | 2,907,955 |
| 2003 | 4,001 | 0 | 65,691 | 0 | 0 | 4,453 | 26,968 | 3,151,625 | 3,325,936 |
| 2004 | 3,776 | 0 | 66,498 | 0 | 0 | 4,165 | 29,705 | 3,050,652 | 3,227,716 |
| 2005 | 2,709 | 4,684 | 68,190 | 0 | 0 | 4,251 | 23,344 | 3,597,829 | 3,751,453 |
| 2006 | 2,735 | 0 | 85,214 | 0 | 0 | 4,209 | 23,275 | 3,526,551 | 3,688,128 |
| 2007 | 6,071 | 0 | 93,954 | 0 | 49 | 3,776 | 27,740 | 3,088,763 | 3,281,192 |
| 2008 | 0 | 0 | 68,385 | 17,059 | 0 | 3,402 | 18,393 | 1,995,795 | 2,167,212 |
| 2009 | 1 | 0 | 83,255 | 0 | 0 | 3,801 | 15,452 | 2,057,553 | 2,216,554 |
| 2010 | 0 | 0 | 31,590 | 0 | 108 | 5,136 | 25,758 | 1,510,007 | 1,652,669 |
| 2011 | 0 | 0 | 80,672 | 0 | 305 | 4,836 | 45,486 | 3,386,971 | 3,548,501 |
| 2012 | 0 | 0 | 80,672 | 0 | 305 | 4,836 | 45,486 | 3,384,048 | 3,548,746 |
| 2013 | 0 | 0 | 80,672 | 0 | 305 | 4,836 | 45,486 | 3,388,912 | 3,554,125 |
| 2014 | 0 | 0 | 80,672 | 0 | 305 | 4,836 | 45,486 | 3,414,526 | 3,581,589 |
| 2015 | 0 | 0 | 80,672 | 0 | 305 | 25,000 | 45,486 | 3,877,152 | 4,135,586 |
| 2016 | 0 | 0 | 80,672 | 0 | 305 | 25,000 | 45,486 | 3,877,152 | 4,135,686 |
| 2017 | 0 | 0 | 80,672 | 0 | 305 | 25,000 | 45,486 | 3,877,152 | 4,135,686 |
| 2018 | 0 | 0 | 80,672 | 0 | 305 | 25,000 | 45,486 | 3,877,152 | 4,135,686 |
| 2019 | 0 | 0 | 80,672 | 0 | 305 | 25,000 | 45,486 | 3,877,152 | 4,135,686 |
| 2020 | 0 | 0 | 80,672 | 0 | 305 | 25,000 | 45,486 | 3,877,152 | 4,135,686 |
| 2021 | 0 | 0 | 80,672 | 0 | 305 | 25,000 | 45,486 | 3,877,152 | 4,135,686 |
| 2022 | 0 | 0 | 80,672 | 0 | 305 | 25,000 | 45,486 | 3,877,152 | 4,135,686 |
| 2023 | 0 | 0 | 80,672 | 0 | 305 | 25,000 | 45,486 | 3,877,152 | 4,135,686 |
| 2024 | 0 | 0 | 80,672 | 0 | 305 | 25,000 | 45,486 | 3,877,152 | 4,135,686 |
| 2025 | 0 | 0 | 80,672 | 0 | 305 | 25,000 | 45,486 | 3,877,152 | 4,135,686 |
| 2026 | 0 | 0 | 80,672 | 0 | 305 | 25,000 | 45,486 | 3,877,152 | 4,135,686 |
| 2027 | 0 | 0 | 80,672 | 0 | 305 | 25,000 | 45,486 | 3,877,152 | 4,135,686 |
| 2028 | 0 | 0 | 80,672 | 0 | 305 | 25,000 | 45,486 | 3,877,152 | 4,135,686 |
| 2029 | 0 | 0 | 80,672 | 0 | 305 | 25,000 | 45,486 | 3,877,152 | 4,135,686 |
| 2030 | 0 | 0 | 80,672 | 0 | 305 | 25,000 | 45,486 | 3,877,152 | 4,135,686 |
| 2031 | 0 | 0 | 80,672 | 0 | 305 | 25,000 | 45,486 | 3,877,152 | 4,135,686 |
| 2032 | 0 | 0 | 80,672 | 0 | 305 | 25,000 | 45,486 | 3,877,152 | 4,135,686 |
| 2033 | 0 | 0 | 80,672 | 0 | 305 | 25,000 | 45,486 | 3,877,152 | 4,135,686 |
| 2034 | 0 | 0 | 80,672 | 0 | 305 | 25,000 | 45,486 | 3,877,152 | 4,135,686 |
| 2035 | 0 | 0 | 80,672 | 0 | 305 | 25,000 | 45,486 | 3,877,152 | 4,135,686 |
| TOTAL | 351,751 | 4,684 | 5,555,293 | 17,259 | 7,782 | 598,571 | 1,443,302 | 171,638,085 | 183,540,014 |

TABLE B-5B. Annual Water Quantities Delivered to Each Contractor

(in acre-feet)

Sheet 1 of 4

| Calendar Year | NORTH BAY AREA | | | SOUTH BAY AREA(b) | | | | CENTRAL COASTAL AREA | | |
|------------------|------------------------------|------------------------|-----------|--|--|--|------------|--|--------------------------------------|-----------|
| | Napa (a) County FC&WCD | Solano County WA | Total | Alameda County FC&WCD, Zone 7 | Alameda County Water District | Santa Clara Valley Water District | Total | San Luis Obispo County FC&WCD | Santa Barbara County FC&WCD | Total |
| | [1] | [2] | [3] | [4] | [5] | [6] | [7] | [8] | [9] | [10] |
| 1962 | 0 | 0 | 0 | 494 | 8,412 | 0 | 8,906 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 1,731 | 10,914 | 0 | 12,645 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 1,673 | 19,238 | 0 | 20,911 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 2,605 | 16,407 | 15,014 | 34,026 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 5,511 | 14,864 | 34,538 | 54,913 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 4,780 | 12,882 | 39,101 | 56,763 | 0 | 0 | 0 |
| 1968 | 1,214 | 0 | 1,214 | 6,133 | 24,817 | 70,105 | 101,055 | 0 | 0 | 0 |
| 1969 | 2,687 | 0 | 2,687 | 6,635 | 813 | 62,264 | 69,712 | 0 | 0 | 0 |
| 1970 | 3,618 | 0 | 3,618 | 9,249 | 0 | 80,311 | 89,560 | 0 | 0 | 0 |
| 1971 | 2,521 | 0 | 2,521 | 5,017 | 5,961 | 87,606 | 98,584 | 0 | 0 | 0 |
| 1972 | 3,647 | 0 | 3,647 | 10,489 | 27,671 | 100,266 | 138,426 | 0 | 0 | 0 |
| 1973 | 3,792 | 0 | 3,792 | 2,975 | 2,521 | 88,582 | 94,078 | 0 | 0 | 0 |
| 1974 | 4,870 | 0 | 4,870 | 1,314 | 4 | 88,000 | 89,318 | 0 | 0 | 0 |
| 1975 | 6,840 | 0 | 6,840 | 4,618 | 986 | 88,000 | 93,604 | 0 | 0 | 0 |
| 1976 | 7,122 | 0 | 7,122 | 17,131 | 21,300 | 88,000 | 126,431 | 0 | 0 | 0 |
| 1977 | 8,226 | 0 | 8,226 | 12,644 | 18,840 | 76,220 | 107,704 | 0 | 0 | 0 |
| 1978 | 6,034 | 0 | 6,034 | 10,984 | 5,863 | 95,727 | 112,574 | 0 | 0 | 0 |
| 1979 | 6,561 | 0 | 6,561 | 19,325 | 10,874 | 91,991 | 122,190 | 0 | 0 | 0 |
| 1980 | 6,707 | 0 | 6,707 | 16,790 | 11,034 | 88,000 | 115,824 | 0 | 0 | 0 |
| 1981 | 9,001 | 0 | 9,001 | 19,590 | 21,917 | 88,000 | 129,507 | 0 | 0 | 0 |
| 1982 | 1,213 | 0 | 1,213 | 13,123 | 6,316 | 88,000 | 107,439 | 0 | 0 | 0 |
| 1983 | 2,287 | 0 | 2,287 | 4,766 | 3,157 | 86,733 | 94,656 | 0 | 0 | 0 |
| 1984 | 2,923 | 0 | 2,923 | 6,784 | 3,338 | 88,000 | 98,122 | 0 | 0 | 0 |
| 1985 | 4,039 | 0 | 4,039 | 15,072 | 19,016 | 88,000 | 122,088 | 0 | 0 | 0 |
| 1986 | 3,519 | 1,400 | 4,919 | 10,609 | 12,379 | 88,000 | 110,988 | 0 | 0 | 0 |
| 1987 | 7,693 | 1,550 | 9,243 | 23,406 | 25,390 | 88,000 | 136,796 | 0 | 0 | 0 |
| 1988 | 5,392 | 9,726 | 15,118 | 25,830 | 33,464 | 87,961 | 147,255 | 0 | 0 | 0 |
| 1989 | 6,195 | 17,256 | 23,451 | 26,227 | 26,042 | 90,000 | 142,269 | 0 | 0 | 0 |
| 1990 | 6,940 | 19,131 | 26,071 | 33,034 | 31,703 | 92,000 | 156,737 | 0 | 0 | 0 |
| 1991 | 1,380 | 6,972 | 8,352 | 9,411 | 12,648 | 28,200 | 50,259 | 0 | 1,240 | 1,240 |
| 1992 | 4,001 | 14,773 | 18,774 | 14,669 | 19,153 | 42,839 | 76,661 | 0 | 0 | 0 |
| 1993 | 5,286 | 29,180 | 34,466 | 33,635 | 10,271 | 62,065 | 105,971 | 0 | 0 | 0 |
| 1994 | 6,792 | 25,256 | 32,048 | 20,542 | 22,911 | 57,115 | 100,568 | 0 | 0 | 0 |
| 1995 | 5,182 | 21,345 | 26,527 | 30,091 | 17,793 | 28,756 | 76,640 | 0 | 0 | 0 |
| 1996 | 4,893 | 29,999 | 34,892 | 18,903 | 19,662 | 89,850 | 128,415 | 100 | 0 | 100 |
| 1997 | 4,341 | 33,530 | 37,871 | 27,522 | 24,063 | 95,601 | 147,186 | 1,199 | 7,439 | 8,638 |
| 1998 | 5,359 | 29,766 | 35,125 | 17,941 | 19,075 | 63,410 | 100,426 | 3,592 | 18,618 | 22,210 |
| 1999 | 5,304 | 34,753 | 40,057 | 50,910 | 37,652 | 82,945 | 171,507 | 3,743 | 20,137 | 23,880 |
| 2000 | 4,958 | 37,015 | 41,973 | 58,617 | 35,978 | 101,988 | 196,583 | 3,962 | 22,741 | 26,703 |
| 2001 | 9,345 | 34,586 | 43,931 | 34,409 | 18,004 | 77,922 | 130,335 | 4,283 | 18,946 | 23,229 |
| 2002 | 6,875 | 38,560 | 45,435 | 53,261 | 27,811 | 62,186 | 143,258 | 4,355 | 27,636 | 31,991 |
| 2003 | 7,646 | 33,951 | 41,597 | 45,450 | 36,590 | 108,981 | 191,021 | 4,453 | 26,968 | 31,421 |
| 2004 | 8,134 | 43,002 | 51,136 | 52,364 | 27,884 | 59,458 | 139,706 | 4,165 | 29,705 | 33,870 |
| 2005 | 7,669 | 37,819 | 45,488 | 47,512 | 44,599 | 128,249 | 220,360 | 4,251 | 23,344 | 27,595 |
| 2006 | 7,789 | 35,516 | 43,305 | 54,527 | 43,079 | 128,210 | 225,816 | 4,209 | 23,275 | 27,484 |
| 2007 | 10,957 | 47,300 | 58,257 | 40,157 | 24,391 | 75,382 | 139,930 | 3,776 | 27,740 | 31,516 |
| 2008 | 13,292 | 41,320 | 54,612 | 41,186 | 22,902 | 59,160 | 123,248 | 3,402 | 18,393 | 21,795 |
| 2009 | 10,904 | 30,950 | 41,854 | 31,087 | 19,496 | 74,515 | 125,098 | 3,801 | 15,452 | 19,253 |
| 2010 | 12,405 | 23,884 | 36,289 | 44,260 | 12,957 | 48,400 | 105,617 | 5,136 | 25,758 | 30,894 |
| 2011 | 19,900 | 30,348 | 50,248 | 56,058 | 31,500 | 77,500 | 165,058 | 4,836 | 45,486 | 50,322 |
| 2012 | 20,200 | 30,348 | 50,548 | 56,638 | 31,500 | 77,500 | 165,638 | 4,836 | 45,486 | 50,322 |
| 2013 | 20,425 | 30,348 | 50,773 | 56,838 | 31,500 | 77,500 | 165,838 | 4,836 | 45,486 | 50,322 |
| 2014 | 20,425 | 31,348 | 51,773 | 57,598 | 31,500 | 77,500 | 166,598 | 4,836 | 45,486 | 50,322 |
| 2015 | 29,025 | 47,756 | 76,781 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| 2016 | 29,025 | 47,756 | 76,781 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| 2017 | 29,025 | 47,756 | 76,781 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| 2018 | 29,025 | 47,756 | 76,781 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| 2019 | 29,025 | 47,756 | 76,781 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| 2020 | 29,025 | 47,756 | 76,781 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| 2021 | 29,025 | 47,756 | 76,781 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| 2022 | 29,025 | 47,756 | 76,781 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| 2023 | 29,025 | 47,756 | 76,781 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| 2024 | 29,025 | 47,756 | 76,781 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| 2025 | 29,025 | 47,756 | 76,781 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| 2026 | 29,025 | 47,756 | 76,781 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| 2027 | 29,025 | 47,756 | 76,781 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| 2028 | 29,025 | 47,756 | 76,781 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| 2029 | 29,025 | 47,756 | 76,781 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| 2030 | 29,025 | 47,756 | 76,781 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| 2031 | 29,025 | 47,756 | 76,781 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| 2032 | 29,025 | 47,756 | 76,781 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| 2033 | 29,025 | 47,756 | 76,781 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| 2034 | 29,025 | 47,756 | 76,781 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| 2035 | 29,025 | 47,756 | 76,781 | 80,619 | 42,000 | 100,000 | 222,619 | 25,000 | 45,486 | 70,486 |
| TOTAL | 946,028 | 1,803,808 | 2,749,836 | 2,965,124 | 1,901,042 | 5,963,651 | 10,829,817 | 598,771 | 1,444,542 | 2,043,313 |

(a) For the period 1968 through 1987, deliveries are non-Project water pumped through an interim facility.

(b) For the period June 1962 through November 1967, deliveries were supplied by non-Project water.

TABLE B-5B. Annual Water Quantities Delivered to Each Contractor

(in acre-feet)

Sheet 2 of 4

| Calendar Year | SAN JOAQUIN VALLEY AREA | | | | | | | | |
|------------------|--------------------------------------|---|--------------------------------|--------------|------------|-----------------------|-------------------------------|---|------------|
| | Dudley Ridge Water District | Empire West Side Irrigation District | Kern County Water Agency | | | County of Kings | Oak Flat Water District | Tulare Lake Basin Water Storage District | Total |
| | | | Municipal and Industrial | Agricultural | Total | | | | |
| | [11] | [12] | [13] | [14] | [15] | [16] | [17] | [18] | [19] |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1968 | 26,360 | 1,978 | 0 | 127,384 | 127,384 | 900 | 3,084 | 25,100 | 184,806 |
| 1969 | 31,375 | 56 | 0 | 141,265 | 141,265 | 100 | 3,016 | 9,923 | 185,735 |
| 1970 | 40,407 | 3,942 | 0 | 204,634 | 204,634 | 0 | 5,911 | 9,578 | 264,472 |
| 1971 | 41,053 | 5,990 | 0 | 360,151 | 360,151 | 3,700 | 7,212 | 122,485 | 540,591 |
| 1972 | 42,443 | 5,795 | 0 | 490,781 | 490,781 | 1,400 | 8,166 | 258,393 | 806,978 |
| 1973 | 22,057 | 3,000 | 0 | 341,469 | 341,469 | 1,500 | 3,214 | 50,464 | 421,704 |
| 1974 | 33,390 | 3,000 | 23,708 | 323,292 | 347,000 | 1,500 | 3,471 | 72,289 | 460,650 |
| 1975 | 40,555 | 3,000 | 14,529 | 396,291 | 410,820 | 1,600 | 3,576 | 86,258 | 545,809 |
| 1976 | 41,421 | 3,000 | 46,719 | 392,531 | 439,250 | 1,600 | 4,112 | 58,811 | 548,194 |
| 1977 | 11,153 | 738 | 27,882 | 163,425 | 191,307 | 1,530 | 1,472 | 18,081 | 224,281 |
| 1978 | 51,747 | 454 | 76,895 | 590,452 | 667,347 | 2,070 | 3,906 | 12,053 | 737,577 |
| 1979 | 38,544 | 1,739 | 62,997 | 683,049 | 746,046 | 2,000 | 6,149 | 155,121 | 949,599 |
| 1980 | 41,000 | 894 | 45,943 | 588,557 | 634,500 | 2,200 | 5,700 | 75,444 | 759,738 |
| 1981 | 41,000 | 5,859 | 75,758 | 615,642 | 691,400 | 2,300 | 4,300 | 83,438 | 828,297 |
| 1982 | 41,000 | 361 | 47,477 | 697,823 | 745,300 | 1,750 | 3,838 | 18,551 | 810,800 |
| 1983 | 42,900 | 0 | 6,854 | 587,653 | 594,507 | 3,550 | 3,822 | 1,006 | 645,785 |
| 1984 | 45,100 | 0 | 90,904 | 769,696 | 860,600 | 3,100 | 5,700 | 5,743 | 920,243 |
| 1985 | 46,251 | 5,197 | 88,515 | 800,381 | 888,896 | 3,400 | 5,433 | 109,791 | 1,058,968 |
| 1986 | 50,249 | 1,170 | 77,240 | 829,101 | 906,341 | 3,700 | 5,107 | 79,355 | 1,045,922 |
| 1987 | 46,288 | 2,525 | 117,174 | 852,731 | 969,905 | 4,000 | 5,625 | 93,084 | 1,121,427 |
| 1988 | 47,994 | 3,475 | 122,409 | 887,111 | 1,009,520 | 4,000 | 4,412 | 95,866 | 1,165,267 |
| 1989 | 57,049 | 3,000 | 123,896 | 1,022,166 | 1,146,062 | 4,000 | 6,091 | 127,950 | 1,344,152 |
| 1990 | 36,296 | 1,279 | 127,837 | 584,611 | 712,448 | 2,000 | 2,922 | 57,070 | 812,015 |
| 1991 | 927 | 221 | 33,122 | 8,965 | 42,087 | 0 | 141 | 2,180 | 45,556 |
| 1992 | 23,770 | 1,354 | 62,326 | 420,894 | 483,220 | 1,806 | 2,239 | 46,728 | 559,117 |
| 1993 | 50,618 | 2,741 | 128,316 | 1,039,614 | 1,167,930 | 4,000 | 4,858 | 124,468 | 1,354,615 |
| 1994 | 28,793 | 1,666 | 87,139 | 570,020 | 657,159 | 2,116 | 3,071 | 62,362 | 755,167 |
| 1995 | 60,686 | 1,631 | 135,415 | 1,016,114 | 1,151,529 | 4,000 | 5,169 | 101,869 | 1,324,884 |
| 1996 | 56,948 | 1,868 | 135,654 | 1,049,409 | 1,185,063 | 4,000 | 4,904 | 236,875 | 1,489,658 |
| 1997 | 71,308 | 0 | 120,708 | 987,451 | 1,108,159 | 0 | 5,238 | 22,369 | 1,121,427 |
| 1998 | 55,650 | 542 | 89,765 | 768,825 | 858,590 | 15 | 4,401 | 20,677 | 939,875 |
| 1999 | 59,697 | 3,176 | 138,153 | 1,039,985 | 1,178,138 | 4,000 | 4,871 | 289,735 | 1,539,617 |
| 2000 | 60,539 | 1,799 | 113,276 | 1,110,861 | 1,224,137 | 3,600 | 4,508 | 201,294 | 1,495,877 |
| 2001 | 41,902 | 1,360 | 20,822 | 633,469 | 654,291 | 1,560 | 3,592 | 84,726 | 787,431 |
| 2002 | 48,915 | 1,405 | 90,144 | 735,315 | 825,459 | 2,854 | 4,885 | 96,502 | 980,020 |
| 2003 | 46,082 | 1,436 | 107,061 | 857,169 | 964,230 | 3,692 | 4,266 | 105,841 | 1,125,547 |
| 2004 | 49,080 | 3,562 | 126,933 | 712,193 | 839,126 | 9,053 | 4,629 | 90,021 | 995,471 |
| 2005 | 79,005 | 3,834 | 91,535 | 1,306,446 | 1,397,981 | 19,806 | 4,194 | 140,279 | 1,645,099 |
| 2006 | 72,080 | 3,282 | 98,199 | 1,164,671 | 1,262,870 | 9,530 | 4,242 | 108,207 | 1,460,211 |
| 2007 | 45,135 | 2,084 | 79,144 | 949,601 | 1,028,745 | 5,746 | 3,567 | 87,083 | 1,172,360 |
| 2008 | 22,174 | 947 | 24,572 | 719,467 | 744,039 | 3,836 | 1,985 | 33,904 | 806,885 |
| 2009 | 21,237 | 1,034 | 2,912 | 773,354 | 776,266 | 3,391 | 1,993 | 36,836 | 840,757 |
| 2010 | 27,367 | 1,050 | 41,771 | 404,856 | 446,627 | 3,718 | 2,463 | 33,822 | 515,047 |
| 2011 | 50,343 | 3,000 | 134,600 | 823,942 | 958,542 | 9,305 | 5,700 | 88,922 | 1,115,812 |
| 2012 | 50,343 | 3,000 | 134,600 | 823,942 | 958,542 | 9,305 | 5,700 | 88,922 | 1,115,812 |
| 2013 | 50,343 | 3,000 | 134,600 | 823,942 | 958,542 | 9,305 | 5,700 | 88,922 | 1,115,812 |
| 2014 | 50,343 | 3,000 | 134,600 | 823,942 | 958,542 | 9,305 | 5,700 | 88,922 | 1,115,812 |
| 2015 | 47,343 | 3,000 | 134,600 | 848,130 | 982,730 | 9,305 | 5,700 | 88,922 | 1,137,000 |
| 2016 | 47,343 | 3,000 | 134,600 | 848,130 | 982,730 | 9,305 | 5,700 | 88,922 | 1,137,000 |
| 2017 | 47,343 | 3,000 | 134,600 | 848,130 | 982,730 | 9,305 | 5,700 | 88,922 | 1,137,000 |
| 2018 | 47,343 | 3,000 | 134,600 | 848,130 | 982,730 | 9,305 | 5,700 | 88,922 | 1,137,000 |
| 2019 | 47,343 | 3,000 | 134,600 | 848,130 | 982,730 | 9,305 | 5,700 | 88,922 | 1,137,000 |
| 2020 | 43,343 | 3,000 | 134,600 | 848,130 | 982,730 | 9,305 | 5,700 | 88,922 | 1,133,000 |
| 2021 | 43,343 | 3,000 | 134,600 | 848,130 | 982,730 | 9,305 | 5,700 | 88,922 | 1,133,000 |
| 2022 | 43,343 | 3,000 | 134,600 | 848,130 | 982,730 | 9,305 | 5,700 | 88,922 | 1,133,000 |
| 2023 | 43,343 | 3,000 | 134,600 | 848,130 | 982,730 | 9,305 | 5,700 | 88,922 | 1,133,000 |
| 2024 | 43,343 | 3,000 | 134,600 | 848,130 | 982,730 | 9,305 | 5,700 | 88,922 | 1,133,000 |
| 2025 | 43,343 | 3,000 | 134,600 | 848,130 | 982,730 | 9,305 | 5,700 | 88,922 | 1,133,000 |
| 2026 | 43,343 | 3,000 | 134,600 | 848,130 | 982,730 | 9,305 | 5,700 | 88,922 | 1,133,000 |
| 2027 | 43,343 | 3,000 | 134,600 | 848,130 | 982,730 | 9,305 | 5,700 | 88,922 | 1,133,000 |
| 2028 | 43,343 | 3,000 | 134,600 | 848,130 | 982,730 | 9,305 | 5,700 | 88,922 | 1,133,000 |
| 2029 | 43,343 | 3,000 | 134,600 | 848,130 | 982,730 | 9,305 | 5,700 | 88,922 | 1,133,000 |
| 2030 | 43,343 | 3,000 | 134,600 | 848,130 | 982,730 | 9,305 | 5,700 | 88,922 | 1,133,000 |
| 2031 | 43,343 | 3,000 | 134,600 | 848,130 | 982,730 | 9,305 | 5,700 | 88,922 | 1,133,000 |
| 2032 | 43,343 | 3,000 | 134,600 | 848,130 | 982,730 | 9,305 | 5,700 | 88,922 | 1,133,000 |
| 2033 | 43,343 | 3,000 | 134,600 | 848,130 | 982,730 | 9,305 | 5,700 | 88,922 | 1,133,000 |
| 2034 | 43,343 | 3,000 | 134,600 | 848,130 | 982,730 | 9,305 | 5,700 | 88,922 | 1,133,000 |
| 2035 | 43,343 | 3,000 | 134,600 | 848,130 | 982,730 | 9,305 | 5,700 | 88,922 | 1,133,000 |
| TOTAL | 2,969,120 | 166,444 | 6,268,704 | 49,825,373 | 56,094,077 | 371,248 | 323,955 | 5,774,682 | 65,699,526 |

TABLE B-5B. Annual Water Quantities Delivered to Each Contractor

(in acre-feet)

Sheet 3 of 4

| Calendar Year | SOUTHERN CALIFORNIA AREA | | | | | | | | | |
|------------------|--|--|--|--|---------------------------|--|---------------------------|-------------------------------|--|--|
| | Antelope Valley- East Kern Water Agency | Castaic Lake Water Agency (c) | Coachella Valley Water District | Crestline- Lake Arrowhead Water Agency | Desert Water Agency | Little Rock Creek Irrigation District | Mojave Water Agency | Palmdale Water District | San Bernardino Valley Municipal Water District | San Gabriel Valley Municipal Water District |
| | [20] | [21] | [22] | [23] | [24] | [25] | [26] | [27] | [28] | [29] |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1968 | 0 | 7,382 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1969 | 0 | 9,970 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1970 | 0 | 11,739 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1971 | 0 | 12,490 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1972 | 53 | 13,905 | 0 | 464 | 0 | 338 | 55 | 0 | 1,275 | 0 |
| 1973 | 20 | 9,418 | 5,800 | 389 | 9,000 | 290 | 0 | 0 | 32,426 | 0 |
| 1974 | 1,259 | 9,700 | 6,400 | 627 | 10,000 | 400 | 14 | 0 | 16,605 | 612 |
| 1975 | 8,068 | 10,700 | 7,000 | 825 | 11,000 | 520 | 0 | 0 | 13,865 | 5,450 |
| 1976 | 27,782 | 11,700 | 7,600 | 1,002 | 12,000 | 589 | 0 | 0 | 12,273 | 6,071 |
| 1977 | 11,202 | 5,075 | 0 | 1,109 | 0 | 111 | 80 | 0 | 24,833 | 8,996 |
| 1978 | 44,137 | 11,362 | 10,084 | 1,209 | 15,300 | 208 | 0 | 0 | 4,055 | 7,771 |
| 1979 | 60,493 | 19,145 | 10,063 | 1,260 | 15,000 | 133 | 4,000 | 0 | 18 | 290 |
| 1980 | 72,407 | 15,092 | 10,884 | 1,239 | 17,000 | 191 | 4,000 | 0 | 0 | 1,085 |
| 1981 | 79,375 | 18,461 | 12,105 | 1,485 | 19,000 | 1,270 | 4,000 | 0 | 16,021 | 3,619 |
| 1982 | 50,291 | 22,216 | 13,326 | 1,238 | 21,000 | 0 | 10,500 | 0 | 8,409 | 12,599 |
| 1983 | 32,961 | 22,135 | 14,547 | 911 | 23,000 | 38 | 0 | 0 | 5,994 | 734 |
| 1984 | 32,662 | 24,218 | 15,768 | 1,128 | 25,000 | 1 | 0 | 0 | 5,556 | 7,656 |
| 1985 | 37,064 | 24,500 | 16,989 | 1,422 | 27,000 | 0 | 0 | 1,558 | 7,390 | 5,028 |
| 1986 | 32,449 | 27,229 | 18,210 | 1,506 | 29,000 | 163 | 0 | 3,096 | 6,421 | 9,454 |
| 1987 | 34,089 | 27,988 | 19,431 | 1,849 | 31,500 | 1,085 | 17 | 5,379 | 18,751 | 10,630 |
| 1988 | 34,079 | 30,438 | 20,652 | 2,006 | 34,000 | 419 | 9 | 1,770 | 21,386 | 8,948 |
| 1989 | 45,280 | 36,364 | 21,873 | 2,170 | 36,500 | 971 | 200 | 9,009 | 20,782 | 12,839 |
| 1990 | 47,206 | 28,579 | 23,100 | 1,827 | 38,100 | 1,747 | 0 | 8,608 | 18,831 | 16,649 |
| 1991 | 9,568 | 4,562 | 6,930 | 849 | 11,430 | 522 | 3,423 | 3,914 | 3,661 | 5,399 |
| 1992 | 30,265 | 20,699 | 10,427 | 519 | 17,197 | 251 | 10,686 | 4,035 | 3,358 | 7,908 |
| 1993 | 43,102 | 23,039 | 23,100 | 439 | 38,100 | 734 | 11,514 | 7,761 | 4,361 | 14,397 |
| 1994 | 49,153 | 26,441 | 14,102 | 785 | 23,257 | 1,098 | 16,852 | 8,418 | 9,135 | 15,230 |
| 1995 | 47,286 | 27,233 | 23,100 | 409 | 38,100 | 480 | 8,722 | 6,961 | 696 | 12,922 |
| 1996 | 56,356 | 32,500 | 62,219 | 485 | 102,622 | 494 | 7,427 | 11,434 | 6,064 | 15,989 |
| 1997 | 62,393 | 27,712 | 68,340 | 651 | 69,990 | 444 | 10,374 | 11,861 | 9,654 | 18,175 |
| 1998 | 52,926 | 20,093 | 85,709 | 187 | 70,647 | 404 | 3,925 | 8,752 | 1,878 | 9,310 |
| 1999 | 69,073 | 32,899 | 50,480 | 1,132 | 58,100 | 342 | 8,144 | 13,278 | 12,874 | 21,729 |
| 2000 | 83,577 | 40,680 | 43,517 | 0 | 58,234 | 0 | 11,380 | 9,060 | 18,399 | 15,140 |
| 2001 | 62,857 | 31,939 | 9,100 | 1,057 | 15,010 | 0 | 4,433 | 10,427 | 26,488 | 2,360 |
| 2002 | 58,171 | 68,817 | 16,755 | 2,189 | 27,640 | 0 | 4,346 | 18,496 | 72,069 | 24,851 |
| 2003 | 60,029 | 55,736 | 14,443 | 1,563 | 23,819 | 0 | 14,435 | 11,547 | 26,113 | 21,934 |
| 2004 | 59,731 | 83,761 | 15,465 | 2,006 | 21,190 | 0 | 13,176 | 12,162 | 57,030 | 12,541 |
| 2005 | 59,831 | 59,456 | 42,519 | 807 | 49,089 | 0 | 13,561 | 11,712 | 31,550 | 13,984 |
| 2006 | 80,384 | 62,752 | 121,100 | 641 | 50,000 | 0 | 34,014 | 12,492 | 35,331 | 16,284 |
| 2007 | 80,203 | 60,190 | 73,228 | 1,768 | 30,234 | 0 | 46,109 | 19,634 | 57,116 | 4,024 |
| 2008 | 54,436 | 42,878 | 46,791 | 848 | 26,428 | 25 | 25,396 | 14,255 | 35,145 | 7,212 |
| 2009 | 45,670 | 42,085 | 46,022 | 899 | 18,263 | 42 | 29,047 | 15,339 | 39,346 | 11,520 |
| 2010 | 84,840 | 56,264 | 56,018 | 3,480 | 22,648 | 805 | 25,980 | 12,706 | 47,102 | 10,080 |
| 2011 | 68,831 | 30,800 | 69,175 | 3,340 | 27,875 | 2,300 | 82,800 | 21,300 | 102,600 | 16,000 |
| 2012 | 70,896 | 31,400 | 69,175 | 3,460 | 27,875 | 2,300 | 82,800 | 21,300 | 102,600 | 12,000 |
| 2013 | 73,020 | 32,000 | 69,175 | 3,600 | 27,875 | 2,300 | 82,800 | 21,300 | 102,600 | 12,000 |
| 2014 | 75,214 | 36,000 | 69,175 | 3,720 | 27,875 | 2,300 | 81,800 | 21,300 | 102,600 | 28,800 |
| 2015 | 141,400 | 95,200 | 138,350 | 5,800 | 55,750 | 2,300 | 85,800 | 21,300 | 102,600 | 28,800 |
| 2016 | 141,400 | 95,200 | 138,350 | 5,800 | 55,750 | 2,300 | 85,800 | 21,300 | 102,600 | 28,800 |
| 2017 | 141,400 | 95,200 | 138,350 | 5,800 | 55,750 | 2,300 | 85,800 | 21,300 | 102,600 | 28,800 |
| 2018 | 141,400 | 95,200 | 138,350 | 5,800 | 55,750 | 2,300 | 85,800 | 21,300 | 102,600 | 28,800 |
| 2019 | 141,400 | 95,200 | 138,350 | 5,800 | 55,750 | 2,300 | 85,800 | 21,300 | 102,600 | 28,800 |
| 2020 | 141,400 | 95,200 | 138,350 | 5,800 | 55,750 | 2,300 | 89,800 | 21,300 | 102,600 | 28,800 |
| 2021 | 141,400 | 95,200 | 138,350 | 5,800 | 55,750 | 2,300 | 89,800 | 21,300 | 102,600 | 28,800 |
| 2022 | 141,400 | 95,200 | 138,350 | 5,800 | 55,750 | 2,300 | 89,800 | 21,300 | 102,600 | 28,800 |
| 2023 | 141,400 | 95,200 | 138,350 | 5,800 | 55,750 | 2,300 | 89,800 | 21,300 | 102,600 | 28,800 |
| 2024 | 141,400 | 95,200 | 138,350 | 5,800 | 55,750 | 2,300 | 89,800 | 21,300 | 102,600 | 28,800 |
| 2025 | 141,400 | 95,200 | 138,350 | 5,800 | 55,750 | 2,300 | 89,800 | 21,300 | 102,600 | 28,800 |
| 2026 | 141,400 | 95,200 | 138,350 | 5,800 | 55,750 | 2,300 | 89,800 | 21,300 | 102,600 | 28,800 |
| 2027 | 141,400 | 95,200 | 138,350 | 5,800 | 55,750 | 2,300 | 89,800 | 21,300 | 102,600 | 28,800 |
| 2028 | 141,400 | 95,200 | 138,350 | 5,800 | 55,750 | 2,300 | 89,800 | 21,300 | 102,600 | 28,800 |
| 2029 | 141,400 | 95,200 | 138,350 | 5,800 | 55,750 | 2,300 | 89,800 | 21,300 | 102,600 | 28,800 |
| 2030 | 141,400 | 95,200 | 138,350 | 5,800 | 55,750 | 2,300 | 89,800 | 21,300 | 102,600 | 28,800 |
| 2031 | 141,400 | 95,200 | 138,350 | 5,800 | 55,750 | 2,300 | 89,800 | 21,300 | 102,600 | 28,800 |
| 2032 | 141,400 | 95,200 | 138,350 | 5,800 | 55,750 | 2,300 | 89,800 | 21,300 | 102,600 | 28,800 |
| 2033 | 141,400 | 95,200 | 138,350 | 5,800 | 55,750 | 2,300 | 89,800 | 21,300 | 102,600 | 28,800 |
| 2034 | 141,400 | 95,200 | 138,350 | 5,800 | 55,750 | 2,300 | 89,800 | 21,300 | 102,600 | 28,800 |
| 2035 | 141,400 | 95,200 | 138,350 | 5,800 | 55,750 | 2,300 | 89,800 | 21,300 | 102,600 | 28,800 |
| TOTAL | 5,058,089 | 3,358,942 | 4,245,247 | 180,300 | 2,427,648 | 71,615 | 2,521,819 | 786,164 | 3,297,261 | 1,053,020 |

(c) Devil's Den Water District merged with Castaic Lake Water Agency effective January 1, 1992.

TABLE B-5B. Annual Water Quantities Delivered to Each Contractor

(in acre-feet)

Sheet 4 of 4

| Calendar Year | SOUTHERN CALIFORNIA AREA (contd.) | | | | FEATHER RIVER AREA | | | | South Bay Area Future Contractor | GRAND TOTAL |
|------------------|---|--|---|-------------|----------------------------|-----------------------|----------------------------|---------|---|----------------|
| | San Geronio Pass Water Agency | The Metropolitan Water District of Southern California | Ventura County Flood Control District | Total | City of Yuba City | County of Butte | Plumas County FC&WCD | Total | | |
| | [30] | [31] | [32] | [33] | [34] | [35] | [36] | [37] | [38] | [39] |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8,906 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12,645 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20,911 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 34,026 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 54,913 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 56,763 |
| 1968 | 0 | 0 | 0 | 7,382 | 0 | 0 | 0 | 0 | 0 | 294,457 |
| 1969 | 0 | 0 | 0 | 9,970 | 0 | 0 | 0 | 0 | 0 | 268,104 |
| 1970 | 0 | 0 | 0 | 11,739 | 0 | 0 | 70 | 70 | 0 | 369,459 |
| 1971 | 0 | 0 | 0 | 12,490 | 0 | 192 | 64 | 256 | 0 | 654,442 |
| 1972 | 0 | 71,938 | 0 | 88,028 | 0 | 186 | 505 | 691 | 0 | 1,037,770 |
| 1973 | 0 | 159,883 | 0 | 217,226 | 0 | 53 | 679 | 732 | 0 | 737,532 |
| 1974 | 0 | 277,717 | 0 | 323,334 | 0 | 127 | 648 | 775 | 0 | 878,947 |
| 1975 | 0 | 526,491 | 0 | 583,919 | 0 | 253 | 405 | 658 | 0 | 1,230,830 |
| 1976 | 0 | 618,451 | 0 | 697,468 | 0 | 527 | 382 | 909 | 0 | 1,380,124 |
| 1977 | 0 | 189,755 | 0 | 241,161 | 0 | 706 | 303 | 1,009 | 0 | 582,381 |
| 1978 | 0 | 507,565 | 0 | 601,691 | 0 | 579 | 278 | 857 | 0 | 1,458,733 |
| 1979 | 0 | 477,074 | 0 | 587,476 | 0 | 302 | 329 | 631 | 0 | 1,666,457 |
| 1980 | 0 | 531,727 | 0 | 653,625 | 0 | 267 | 295 | 562 | 0 | 1,536,456 |
| 1981 | 0 | 795,846 | 0 | 951,182 | 0 | 221 | 355 | 576 | 0 | 1,918,563 |
| 1982 | 0 | 691,192 | 0 | 830,771 | 0 | 334 | 305 | 639 | 0 | 1,750,862 |
| 1983 | 0 | 343,521 | 0 | 443,841 | 0 | 325 | 262 | 587 | 0 | 1,187,156 |
| 1984 | 0 | 457,582 | 0 | 569,571 | 108 | 177 | 272 | 557 | 0 | 1,591,416 |
| 1985 | 0 | 683,625 | 0 | 804,576 | 62 | 308 | 254 | 624 | 0 | 1,990,295 |
| 1986 | 0 | 708,840 | 0 | 836,368 | 328 | 313 | 317 | 958 | 0 | 1,999,155 |
| 1987 | 0 | 712,424 | 0 | 863,143 | 88 | 459 | 452 | 999 | 0 | 2,131,608 |
| 1988 | 0 | 902,564 | 0 | 1,056,271 | 303 | 385 | 523 | 1,211 | 0 | 2,385,122 |
| 1989 | 0 | 1,156,698 | 0 | 1,342,686 | 403 | 300 | 486 | 1,189 | 0 | 2,853,747 |
| 1990 | 0 | 1,396,423 | 4,836 | 1,585,906 | 494 | 380 | 548 | 1,422 | 0 | 2,582,151 |
| 1991 | 0 | 391,447 | 988 | 442,693 | 265 | 328 | 420 | 1,013 | 0 | 549,113 |
| 1992 | 0 | 710,313 | 0 | 815,658 | 642 | 117 | 485 | 1,244 | 0 | 1,471,454 |
| 1993 | 0 | 652,190 | 0 | 818,737 | 746 | 256 | 444 | 1,446 | 0 | 2,315,235 |
| 1994 | 0 | 807,866 | 0 | 972,337 | 1,035 | 329 | 492 | 1,856 | 0 | 1,861,976 |
| 1995 | 0 | 436,042 | 0 | 601,951 | 910 | 203 | 308 | 1,421 | 0 | 2,031,423 |
| 1996 | 0 | 593,380 | 0 | 888,970 | 820 | 257 | 360 | 1,437 | 0 | 2,543,472 |
| 1997 | 0 | 721,810 | 1,850 | 1,003,254 | 1,005 | 185 | 231 | 1,421 | 0 | 2,405,444 |
| 1998 | 0 | 410,065 | 1,850 | 665,746 | 1,054 | 527 | 0 | 1,581 | 0 | 1,764,963 |
| 1999 | 0 | 852,617 | 1,850 | 1,122,518 | 1,096 | 286 | 0 | 1,382 | 0 | 2,898,961 |
| 2000 | 0 | 1,522,412 | 4,050 | 1,806,449 | 901 | 586 | 0 | 1,487 | 0 | 3,569,072 |
| 2001 | 0 | 1,023,169 | 1,850 | 1,188,690 | 1,065 | 513 | 0 | 1,578 | 0 | 2,175,194 |
| 2002 | 0 | 1,408,919 | 4,998 | 1,707,251 | 1,181 | 419 | 0 | 1,600 | 0 | 2,909,555 |
| 2003 | 116 | 1,701,615 | 5,000 | 1,936,350 | 1,324 | 551 | 0 | 1,875 | 0 | 3,327,811 |
| 2004 | 841 | 1,724,380 | 5,250 | 2,007,533 | 1,434 | 1,440 | 0 | 2,874 | 0 | 3,230,590 |
| 2005 | 692 | 1,528,045 | 1,665 | 1,812,911 | 1,894 | 527 | 0 | 2,421 | 0 | 3,753,874 |
| 2006 | 4,278 | 1,512,186 | 1,850 | 1,931,312 | 5,342 | 468 | 0 | 5,810 | 0 | 3,693,938 |
| 2007 | 3,935 | 1,499,688 | 3,000 | 1,879,129 | 2,327 | 956 | 0 | 3,283 | 0 | 3,284,475 |
| 2008 | 4,905 | 898,313 | 3,798 | 1,160,430 | 1,923 | 451 | 243 | 2,617 | 0 | 2,169,587 |
| 2009 | 6,397 | 930,871 | 3,891 | 1,189,392 | 2,114 | 581 | 200 | 2,895 | 0 | 2,219,249 |
| 2010 | 7,017 | 630,153 | 6,973 | 964,066 | 3,360 | 525 | 756 | 4,641 | 0 | 1,656,554 |
| 2011 | 9,300 | 1,711,500 | 19,000 | 2,164,821 | 9,600 | 1,841 | 2,240 | 13,681 | 0 | 3,559,942 |
| 2012 | 9,800 | 1,711,500 | 19,000 | 2,164,106 | 9,600 | 1,907 | 2,320 | 13,827 | 0 | 3,560,253 |
| 2013 | 11,800 | 1,711,500 | 19,000 | 2,168,970 | 9,600 | 1,984 | 2,410 | 13,994 | 0 | 3,565,709 |
| 2014 | 15,300 | 1,711,500 | 19,000 | 2,194,584 | 9,600 | 3,006 | 2,500 | 15,106 | 0 | 3,594,195 |
| 2015 | 17,300 | 1,911,500 | 20,000 | 2,626,100 | 9,600 | 27,500 | 2,600 | 39,700 | 0 | 4,172,686 |
| 2016 | 17,300 | 1,911,500 | 20,000 | 2,626,100 | 9,600 | 27,500 | 2,700 | 39,800 | 0 | 4,172,786 |
| 2017 | 17,300 | 1,911,500 | 20,000 | 2,626,100 | 9,600 | 27,500 | 2,700 | 39,800 | 0 | 4,172,786 |
| 2018 | 17,300 | 1,911,500 | 20,000 | 2,626,100 | 9,600 | 27,500 | 2,700 | 39,800 | 0 | 4,172,786 |
| 2019 | 17,300 | 1,911,500 | 20,000 | 2,626,100 | 9,600 | 27,500 | 2,700 | 39,800 | 0 | 4,172,786 |
| 2020 | 17,300 | 1,911,500 | 20,000 | 2,630,100 | 9,600 | 27,500 | 2,700 | 39,800 | 0 | 4,172,786 |
| 2021 | 17,300 | 1,911,500 | 20,000 | 2,630,100 | 9,600 | 27,500 | 2,700 | 39,800 | 0 | 4,172,786 |
| 2022 | 17,300 | 1,911,500 | 20,000 | 2,630,100 | 9,600 | 27,500 | 2,700 | 39,800 | 0 | 4,172,786 |
| 2023 | 17,300 | 1,911,500 | 20,000 | 2,630,100 | 9,600 | 27,500 | 2,700 | 39,800 | 0 | 4,172,786 |
| 2024 | 17,300 | 1,911,500 | 20,000 | 2,630,100 | 9,600 | 27,500 | 2,700 | 39,800 | 0 | 4,172,786 |
| 2025 | 17,300 | 1,911,500 | 20,000 | 2,630,100 | 9,600 | 27,500 | 2,700 | 39,800 | 0 | 4,172,786 |
| 2026 | 17,300 | 1,911,500 | 20,000 | 2,630,100 | 9,600 | 27,500 | 2,700 | 39,800 | 0 | 4,172,786 |
| 2027 | 17,300 | 1,911,500 | 20,000 | 2,630,100 | 9,600 | 27,500 | 2,700 | 39,800 | 0 | 4,172,786 |
| 2028 | 17,300 | 1,911,500 | 20,000 | 2,630,100 | 9,600 | 27,500 | 2,700 | 39,800 | 0 | 4,172,786 |
| 2029 | 17,300 | 1,911,500 | 20,000 | 2,630,100 | 9,600 | 27,500 | 2,700 | 39,800 | 0 | 4,172,786 |
| 2030 | 17,300 | 1,911,500 | 20,000 | 2,630,100 | 9,600 | 27,500 | 2,700 | 39,800 | 0 | 4,172,786 |
| 2031 | 17,300 | 1,911,500 | 20,000 | 2,630,100 | 9,600 | 27,500 | 2,700 | 39,800 | 0 | 4,172,786 |
| 2032 | 17,300 | 1,911,500 | 20,000 | 2,630,100 | 9,600 | 27,500 | 2,700 | 39,800 | 0 | 4,172,786 |
| 2033 | 17,300 | 1,911,500 | 20,000 | 2,630,100 | 9,600 | 27,500 | 2,700 | 39,800 | 0 | 4,172,786 |
| 2034 | 17,300 | 1,911,500 | 20,000 | 2,630,100 | 9,600 | 27,500 | 2,700 | 39,800 | 0 | 4,172,786 |
| 2035 | 17,300 | 1,911,500 | 20,000 | 2,630,100 | 9,600 | 27,500 | 2,700 | 39,800 | 0 | 4,172,786 |
| TOTAL | 437,681 | 78,152,297 | 549,699 | 102,139,782 | 272,224 | 602,137 | 77,741 | 952,102 | 0 | 184,414,376 |

TABLE B-6. Annual Water Quantities Conveyed through Each Pumping and Power Recovery Plant of Project Transportation Facilities

(in acre-feet)

Sheet 1 of 10

| Calendar Year | NORTH BAY AQUEDUCT | | | | | | | | | | | |
|----------------------|--------------------------------|----------------------------|-----------------------------|--------|--|----------------------------|-----------------------------|--------|--|----------------------------|---------------------------------|--------|
| | Barker Slough Pumping Plant | | | | Cordelia Pumping Plant Solano County WA | | | | Cordelia Pumping Plant Napa County FC&WCD | | | |
| | Initial Fill Water | Opera- tional Losses | Water Supply Delivery | Total | Initial Fill Water | Opera- tional Losses | Water Supply Delivery | Total | Initial Fill Water | Opera- tional Losses | Water Supply Delivery (a) | Total |
| | [1] | [2] | [3] | [4] | [5] | [6] | [7] | [8] | [9] | [10] | [11] | [12] |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1968 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | (10) | 1,214 | 1,228 |
| 1969 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2,687 | 2,689 |
| 1970 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 3,618 | 3,636 |
| 1971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 2,521 | 2,525 |
| 1972 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | (10) | 3,647 | 3,637 |
| 1973 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3,792 | 3,793 |
| 1974 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 4,870 | 4,880 |
| 1975 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 6,840 | 6,850 |
| 1976 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 7,122 | 7,126 |
| 1977 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 8,226 | 8,228 |
| 1978 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | (6) | 6,034 | 6,028 |
| 1979 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 6,561 | 6,562 |
| 1980 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | (3) | 6,707 | 6,704 |
| 1981 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 9,001 | 9,009 |
| 1982 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | (8) | 1,213 | 1,205 |
| 1983 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | (12) | 2,287 | 2,275 |
| 1984 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | (15) | 2,923 | 2,908 |
| 1985 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 4,039 | 4,052 |
| 1986 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | (4) | 3,519 | 3,515 |
| 1987 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7,693 | 7,693 |
| 1988 | 1 | 283 | 15,118 | 15,402 | 0 | 0 | 9,725 | 9,725 | 1 | (1) | 5,392 | 5,392 |
| 1989 | 0 | 758 | 23,451 | 24,209 | 0 | 0 | 17,246 | 17,246 | 0 | (4) | 6,195 | 6,191 |
| 1990 | 0 | 3 | 26,071 | 26,074 | 0 | (634) | 15,856 | 15,222 | 0 | 3 | 6,940 | 6,943 |
| 1991 | 0 | 667 | 8,352 | 9,019 | 0 | 124 | 3,855 | 3,979 | 0 | 198 | 1,380 | 1,578 |
| 1992 | 0 | 1,643 | 18,774 | 20,417 | 0 | 0 | 9,220 | 9,220 | 0 | 0 | 4,001 | 4,001 |
| 1993 | 0 | 1,153 | 34,466 | 35,619 | 0 | 0 | 14,471 | 14,471 | 0 | 0 | 5,286 | 5,286 |
| 1994 | 0 | 780 | 32,048 | 32,828 | 0 | (6) | 14,913 | 14,907 | 0 | 0 | 6,792 | 6,792 |
| 1995 | 0 | 908 | 26,527 | 27,435 | 0 | 0 | 15,893 | 15,893 | 0 | 0 | 5,182 | 5,182 |
| 1996 | 0 | 1,354 | 34,892 | 36,246 | 0 | 0 | 17,069 | 17,069 | 0 | 0 | 4,893 | 4,893 |
| 1997 | 0 | 1,422 | 37,871 | 39,293 | 0 | 0 | 17,501 | 17,501 | 0 | 0 | 4,341 | 4,341 |
| 1998 | 0 | 1,343 | 35,125 | 36,468 | 0 | 0 | 18,204 | 18,204 | 0 | 0 | 5,359 | 5,359 |
| 1999 | 0 | 2,522 | 40,057 | 42,579 | 0 | 0 | 19,562 | 19,562 | 0 | 0 | 5,304 | 5,304 |
| 2000 | 0 | 1,853 | 41,973 | 43,826 | 0 | 4 | 21,525 | 21,529 | 0 | 180 | 4,958 | 5,138 |
| 2001 | 0 | 1,760 | 43,931 | 45,691 | 0 | 0 | 19,737 | 19,737 | 0 | 0 | 9,345 | 9,345 |
| 2002 | 0 | 496 | 45,435 | 45,931 | 0 | 0 | 19,719 | 19,719 | 0 | 0 | 6,875 | 6,875 |
| 2003 | 0 | 3,991 | 41,597 | 45,588 | 0 | 0 | 16,700 | 16,700 | 0 | 0 | 7,637 | 7,637 |
| 2004 | 0 | 2,181 | 51,136 | 53,317 | 0 | 0 | 21,686 | 21,686 | 0 | 0 | 8,499 | 8,499 |
| 2005 | 0 | 935 | 45,488 | 46,423 | 0 | 0 | 19,189 | 19,189 | 0 | 0 | 8,009 | 8,009 |
| 2006 | 0 | 1,005 | 43,305 | 44,310 | 0 | 0 | 18,651 | 18,651 | 0 | 0 | 8,081 | 8,081 |
| 2007 | 0 | 1,189 | 58,257 | 59,446 | 0 | 0 | 27,793 | 27,793 | 0 | 0 | 11,277 | 11,277 |
| 2008 | 0 | 845 | 54,612 | 55,457 | 0 | 0 | 19,436 | 19,436 | 0 | 255 | 13,740 | 13,995 |
| 2009 | 0 | 537 | 41,854 | 42,391 | 0 | 0 | 15,473 | 15,473 | 0 | 130 | 11,377 | 11,507 |
| 2010 | 0 | 51 | 36,289 | 36,340 | 0 | 0 | 11,810 | 11,810 | 0 | 5 | 12,258 | 12,263 |
| 2011 | 0 | 51 | 50,248 | 50,299 | 0 | 0 | 10,603 | 10,603 | 0 | 5 | 19,900 | 19,905 |
| 2012 | 0 | 51 | 50,548 | 50,599 | 0 | 0 | 10,603 | 10,603 | 0 | 5 | 20,200 | 20,205 |
| 2013 | 0 | 51 | 50,773 | 50,824 | 0 | 0 | 10,603 | 10,603 | 0 | 5 | 20,425 | 20,430 |
| 2014 | 0 | 51 | 51,773 | 51,824 | 0 | 0 | 11,603 | 11,603 | 0 | 5 | 20,425 | 20,430 |
| 2015 | 0 | 51 | 76,781 | 76,832 | 0 | 0 | 13,145 | 13,145 | 0 | 5 | 29,025 | 29,030 |
| 2016 | 0 | 51 | 76,781 | 76,832 | 0 | 0 | 13,145 | 13,145 | 0 | 5 | 29,025 | 29,030 |
| 2017 | 0 | 51 | 76,781 | 76,832 | 0 | 0 | 13,145 | 13,145 | 0 | 5 | 29,025 | 29,030 |
| 2018 | 0 | 51 | 76,781 | 76,832 | 0 | 0 | 13,145 | 13,145 | 0 | 5 | 29,025 | 29,030 |
| 2019 | 0 | 51 | 76,781 | 76,832 | 0 | 0 | 13,145 | 13,145 | 0 | 5 | 29,025 | 29,030 |
| 2020 | 0 | 51 | 76,781 | 76,832 | 0 | 0 | 13,145 | 13,145 | 0 | 5 | 29,025 | 29,030 |
| 2021 | 0 | 51 | 76,781 | 76,832 | 0 | 0 | 13,145 | 13,145 | 0 | 5 | 29,025 | 29,030 |
| 2022 | 0 | 51 | 76,781 | 76,832 | 0 | 0 | 13,145 | 13,145 | 0 | 5 | 29,025 | 29,030 |
| 2023 | 0 | 51 | 76,781 | 76,832 | 0 | 0 | 13,145 | 13,145 | 0 | 5 | 29,025 | 29,030 |
| 2024 | 0 | 51 | 76,781 | 76,832 | 0 | 0 | 13,145 | 13,145 | 0 | 5 | 29,025 | 29,030 |
| 2025 | 0 | 51 | 76,781 | 76,832 | 0 | 0 | 13,145 | 13,145 | 0 | 5 | 29,025 | 29,030 |
| 2026 | 0 | 51 | 76,781 | 76,832 | 0 | 0 | 13,145 | 13,145 | 0 | 5 | 29,025 | 29,030 |
| 2027 | 0 | 51 | 76,781 | 76,832 | 0 | 0 | 13,145 | 13,145 | 0 | 5 | 29,025 | 29,030 |
| 2028 | 0 | 51 | 76,781 | 76,832 | 0 | 0 | 13,145 | 13,145 | 0 | 5 | 29,025 | 29,030 |
| 2029 | 0 | 51 | 76,781 | 76,832 | 0 | 0 | 13,145 | 13,145 | 0 | 5 | 29,025 | 29,030 |
| 2030 | 0 | 51 | 76,781 | 76,832 | 0 | 0 | 13,145 | 13,145 | 0 | 5 | 29,025 | 29,030 |
| 2031 | 0 | 51 | 76,781 | 76,832 | 0 | 0 | 13,145 | 13,145 | 0 | 5 | 29,025 | 29,030 |
| 2032 | 0 | 51 | 76,781 | 76,832 | 0 | 0 | 13,145 | 13,145 | 0 | 5 | 29,025 | 29,030 |
| 2033 | 0 | 51 | 76,781 | 76,832 | 0 | 0 | 13,145 | 13,145 | 0 | 5 | 29,025 | 29,030 |
| 2034 | 0 | 51 | 76,781 | 76,832 | 0 | 0 | 13,145 | 13,145 | 0 | 5 | 29,025 | 29,030 |
| 2035 | 0 | 51 | 76,781 | 76,832 | 0 | 0 | 13,145 | 13,145 | 0 | 5 | 29,025 | 29,030 |

(a) For the period 1968 through 1987, deliveries are non-SWP water pumped through an interim facility.

TABLE B-6. Annual Water Quantities Conveyed through Each Pumping and Power Recovery Plant of Project Transportation Facilities

(in acre-feet)

Sheet 2 of 10

| Calendar | SOUTH BAY AQUEDUCT | | | | | | CALIFORNIA AQUEDUCT | | | | | | | | |
|----------|-------------------------|--------------------|---------------------------|------------------|------------|---------|--|--------------------|---------------------------|--------------|------------|-----------|--------------------|-----------|--|
| | South Bay Pumping Plant | | | | | | North San Joaquin Division Banks Pumping Plant | | | | | | | | |
| | Initial Fill Water | Operational Losses | Reservoir Storage Changes | Deliveries | | Total | Initial Fill Water | Operational Losses | Reservoir Storage Changes | Deliveries | | Total | Conservation Water | Total | |
| | | | | Water Supply (b) | Recreation | | | | | Water Supply | Recreation | | | | |
| Year | [13] | [14] | [15] | [16] | [17] | [18] | [19] | [20] | [21] | [22] | [23] | [24] | [25] | [26] | |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 1962 | 9 | 272 | 0 | 8,906 | 0 | 9,187 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 1963 | 71 | 185 | 0 | 12,645 | 0 | 12,901 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 1964 | 171 | 152 | 0 | 20,911 | 0 | 21,234 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 1965 | 93 | 729 | 0 | 34,026 | 0 | 34,848 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 1966 | 0 | 1,746 | 0 | 54,913 | 0 | 56,659 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 1967 | 0 | 1,677 | 0 | 56,763 | 0 | 58,440 | 5,746 | 1,183 | 0 | 11,538 | 0 | 18,467 | 2,957 | 21,424 | |
| 1968 | 0 | 1,847 | 0 | 101,055 | 0 | 102,902 | 11,079 | 74,464 | 0 | 293,243 | 0 | 378,786 | 531,275 | 910,061 | |
| 1969 | 3,449 | 2,668 | 0 | 69,712 | 0 | 75,829 | 7,336 | 44,287 | 0 | 265,417 | 0 | 317,040 | 531,185 | 848,225 | |
| 1970 | 16,279 | 1,086 | (5,355) | 89,560 | 0 | 101,570 | 23,947 | 20,767 | (5,355) | 365,771 | 0 | 405,130 | (12,995) | 392,135 | |
| 1971 | 0 | 1,815 | 8,854 | 98,584 | 0 | 109,253 | 23,207 | (10,754) | 8,854 | 651,665 | 8 | 672,980 | 7,708 | 680,688 | |
| 1972 | 0 | 3,557 | 2,273 | 138,426 | 0 | 144,256 | 145,066 | 9,057 | (4,285) | 1,033,432 | 6,489 | 1,189,759 | 48,300 | 1,238,059 | |
| 1973 | 0 | (33) | (1,510) | 94,078 | 0 | 92,535 | 214,941 | (4,951) | 2,902 | 733,008 | 1,155 | 947,055 | 55,846 | 1,002,901 | |
| 1974 | 0 | 1,287 | (10,056) | 89,318 | 0 | 80,549 | 247,894 | (11,526) | (32,510) | 873,302 | 2,118 | 1,079,278 | 54,683 | 1,133,961 | |
| 1975 | 0 | 320 | 8,550 | 93,604 | 0 | 102,474 | 110,149 | (8,092) | 16,101 | 1,223,332 | 3,377 | 1,344,867 | (102,625) | 1,242,242 | |
| 1976 | 0 | 2,431 | 1,391 | 126,431 | 141 | 130,394 | 67,834 | 5,443 | (244,124) | 1,372,093 | 1,745 | 1,202,991 | (442,348) | 760,643 | |
| 1977 | 0 | 2,866 | 2,685 | 107,704 | 112 | 113,367 | 0 | 39,897 | (157,543) | 573,146 | 1,111 | 456,611 | (13,507) | 443,104 | |
| 1978 | 0 | 2,165 | (11,249) | 112,574 | 126 | 103,616 | 67,457 | (36,898) | 35,129 | 1,451,842 | 1,177 | 1,518,707 | 752,075 | 2,270,782 | |
| 1979 | 0 | 2,401 | 1,069 | 122,190 | 89 | 125,749 | 17,397 | 60,958 | (32,307) | 1,659,265 | 1,398 | 1,706,711 | (112,053) | 1,594,658 | |
| 1980 | 0 | 1,758 | (6,563) | 115,824 | 123 | 111,142 | 3,159 | 58,484 | (275,538) | 1,529,187 | 2,131 | 1,317,423 | 186,601 | 1,504,024 | |
| 1981 | 0 | 2,627 | 13,742 | 129,507 | 121 | 145,997 | 46,060 | 85,350 | 40,536 | 1,908,986 | 4,974 | 2,085,906 | (931,878) | 1,154,028 | |
| 1982 | 0 | 2,344 | (23,928) | 107,439 | 129 | 85,984 | 5,979 | 61,556 | 99,897 | 1,743,145 | 4,646 | 1,915,223 | 347,983 | 2,263,206 | |
| 1983 | 0 | 2,151 | (22,886) | 94,656 | 132 | 74,053 | 6,071 | 47,022 | (310,477) | 1,184,282 | 7,853 | 934,751 | 835,771 | 1,770,522 | |
| 1984 | 0 | 2,088 | 8,442 | 98,122 | 158 | 108,810 | 38,649 | 97,143 | (108,548) | 1,587,936 | 5,874 | 1,621,054 | 21,875 | 1,642,929 | |
| 1985 | 0 | 2,817 | (1,607) | 122,088 | 152 | 123,450 | 0 | 110,469 | 137,783 | 1,985,632 | 5,452 | 2,239,336 | (110,569) | 2,128,767 | |
| 1986 | 0 | 2,299 | (1,850) | 110,988 | 130 | 111,567 | 0 | 90,799 | 20,177 | 1,993,278 | 3,865 | 2,108,119 | 200,298 | 2,308,417 | |
| 1987 | 0 | 2,625 | (584) | 136,796 | 137 | 138,974 | 0 | 91,427 | (23,116) | 2,121,366 | 7,672 | 2,197,349 | (458,725) | 1,738,624 | |
| 1988 | 0 | 2,884 | (698) | 147,255 | 142 | 149,583 | 0 | 107,249 | (35,484) | 2,368,793 | 4,889 | 2,445,447 | (303,583) | 2,141,864 | |
| 1989 | 0 | 2,673 | 3,296 | 142,269 | 152 | 148,390 | 0 | 117,603 | (38,058) | 2,829,107 | 8,135 | 2,916,787 | 421,131 | 3,337,918 | |
| 1990 | 0 | 894 | 1,982 | 156,537 | 168 | 159,581 | 0 | 99,059 | (290,965) | 2,554,658 | 9,262 | 2,372,014 | (374,027) | 1,997,987 | |
| 1991 | 0 | 2,637 | (4,532) | 50,259 | 150 | 48,514 | 0 | 80,106 | (79,038) | 539,748 | 4,879 | 545,695 | 554,904 | 1,100,599 | |
| 1992 | 0 | 2,881 | 756 | 76,661 | 147 | 80,445 | 0 | 91,391 | (218,170) | 1,451,436 | 2,605 | 1,327,262 | 61,343 | 1,388,605 | |
| 1993 | 0 | 1,940 | (20,051) | 105,971 | 143 | 88,003 | 0 | 149,372 | (273,789) | 2,279,323 | 2,609 | 2,157,515 | 849,249 | 3,006,764 | |
| 1994 | 0 | 1,981 | 1,714 | 100,568 | 168 | 104,431 | 0 | 148,712 | (120,985) | 1,828,072 | 3,803 | 1,859,602 | (324,640) | 1,534,962 | |
| 1995 | 0 | 1,188 | (12,333) | 76,640 | 146 | 65,641 | 0 | 173,074 | (397,605) | 2,003,475 | 2,575 | 1,781,519 | 293,159 | 2,074,678 | |
| 1996 | 0 | 981 | (1,990) | 77,215 | 150 | 76,356 | 0 | 123,502 | 78,123 | 2,507,143 | 3,902 | 2,712,670 | 288,576 | 3,001,246 | |
| 1997 | 0 | 1,575 | 5,016 | 102,186 | 155 | 108,932 | 527 | 135,106 | (98,334) | 2,366,152 | 2,594 | 2,406,045 | (50,000) | 2,356,045 | |
| 1998 | 0 | 1,551 | 3,595 | 70,876 | 114 | 76,136 | 0 | 91,319 | (346,039) | 1,728,257 | 2,107 | 1,475,644 | 120,886 | 1,596,530 | |
| 1999 | 0 | 2,166 | 12,313 | 100,497 | 139 | 115,115 | 0 | 135,809 | (17,569) | 2,855,522 | 4,301 | 2,978,063 | (307,839) | 2,670,224 | |
| 2000 | 0 | 2,346 | (20,958) | 135,533 | 145 | 117,066 | 0 | 115,895 | (13,232) | 3,474,523 | 5,182 | 3,582,368 | (15,487) | 3,566,881 | |
| 2001 | 0 | 2,784 | 1,301 | 95,335 | 196 | 99,616 | 0 | 222,144 | (17,529) | 1,875,153 | 1,978 | 2,081,746 | 86,928 | 2,168,674 | |
| 2002 | 0 | 2,534 | (13,938) | 123,577 | 146 | 112,319 | 0 | 225,032 | 36,404 | 2,818,578 | 4,672 | 3,084,686 | (151,719) | 2,932,967 | |
| 2003 | 0 | 2,920 | (1,399) | 132,714 | 131 | 134,366 | 0 | 329,699 | (49,580) | 3,195,012 | 11,362 | 3,486,493 | 225,348 | 3,711,841 | |
| 2004 | 0 | 2,982 | (7,240) | 125,928 | 150 | 121,820 | 0 | 83,788 | (4,079) | 2,981,223 | 1,337 | 3,062,269 | 103,811 | 3,166,080 | |
| 2005 | 0 | 2,823 | (3,565) | 108,136 | 154 | 107,548 | 0 | 151,931 | (163,243) | 3,665,023 | 1,270 | 3,654,981 | 535,754 | 4,190,735 | |
| 2006 | 0 | 2,989 | (9,645) | 118,272 | 169 | 111,785 | 0 | 67,040 | (129,767) | 3,571,650 | 1,208 | 3,510,131 | 43,481 | 3,553,612 | |
| 2007 | 0 | 2,840 | 14,928 | 134,172 | 146 | 152,086 | 0 | 73,956 | 133,124 | 2,736,094 | 830 | 2,944,004 | (398,297) | 2,545,707 | |
| 2008 | 0 | 2,215 | 880 | 116,562 | 166 | 119,823 | 0 | 130,066 | (3,350) | 1,420,450 | 1,082 | 1,548,248 | (397,949) | 1,150,299 | |
| 2009 | 0 | 1,999 | (1,134) | 116,947 | 108 | 117,920 | 0 | 111,805 | (1,860) | 1,570,092 | 2,023 | 1,682,060 | 928,666 | 2,610,726 | |
| 2010 | 0 | 3,308 | (12,711) | 105,617 | 400 | 96,614 | 0 | 126,340 | 14,879 | 1,615,624 | 8,660 | 1,765,503 | 6,618 | 1,772,121 | |
| 2011 | 0 | 2,812 | (2,899) | 109,042 | 400 | 109,355 | 0 | 121,163 | (1,864) | 3,496,013 | 8,660 | 3,623,972 | 137,242 | 3,761,214 | |
| 2012 | 0 | 2,998 | (2,860) | 111,830 | 400 | 112,368 | 0 | 125,983 | (930) | 3,495,878 | 8,660 | 3,629,591 | (260,827) | 3,368,764 | |
| 2013 | 0 | 3,351 | 0 | 112,030 | 400 | 115,781 | 0 | 128,264 | 9,749 | 3,500,942 | 8,660 | 3,647,615 | 145,525 | 3,793,140 | |
| 2014 | 0 | 3,351 | 0 | 112,790 | 400 | 116,541 | 0 | 130,280 | 16,625 | 3,527,316 | 8,660 | 3,682,881 | (186,678) | 3,496,203 | |
| 2015 | 0 | 3,351 | 0 | 179,053 | 400 | 182,804 | 0 | 130,445 | 32,003 | 4,056,205 | 8,660 | 4,227,313 | (31,516) | 4,195,797 | |
| 2016 | 0 | 3,351 | 0 | 179,053 | 400 | 182,804 | 0 | 128,415 | (28,401) | 4,056,205 | 8,660 | 4,164,879 | 205,134 | 4,370,013 | |
| 2017 | 0 | 3,351 | 0 | 179,053 | 400 | 182,804 | 0 | 128,602 | 61,309 | 4,056,205 | 8,660 | 4,254,776 | 119,885 | 4,374,661 | |
| 2018 | 0 | 3,351 | 0 | 179,053 | 400 | 182,804 | 0 | 128,369 | (80,817) | 4,056,205 | 8,660 | 4,112,417 | (194,534) | 3,917,883 | |
| 2019 | 0 | 3,351 | 0 | 179,053 | 400 | 182,804 | 0 | 128,613 | 50,179 | 4,056,205 | 8,660 | 4,243,657 | 77,224 | 4,320,881 | |
| 2020 | 0 | 3,351 | 0 | 179,053 | 400 | 182,804 | 0 | 128,690 | (366) | 4,056,205 | 8,660 | 4,193,189 | (8,687) | 4,184,502 | |
| 2021 | 0 | 3,351 | 0 | 179,053 | 400 | 182,804 | 0 | 128,769 | 10,725 | 4,056,205 | 8,660 | 4,204,359 | (1,095) | 4,203,264 | |
| 2022 | 0 | 3,351 | 0 | 179,053 | 400 | 182,804 | 0 | 128,846 | (3,483) | 4,056,205 | 8,660 | 4,190,228 | (185,907) | 4,004,321 | |
| 2023 | 0 | 3,351 | 0 | 179,053 | 400 | 182,804 | 0 | 128,818 | (18,971) | 4,056,205 | 8,660 | 4,174,712 | 115,791 | 4,290,503 | |
| 2024 | 0 | 3,351 | 0 | 179,053 | 400 | 182,804 | 0 | 128,625 | 11,289 | 4,056,205 | 8,660 | 4,204,779 | 79,858 | 4,284,637 | |
| 2025 | 0 | 3,351 | 0 | 179,053 | 400 | 182,804 | 0 | 130,380 | (12,518) | 4,056,205 | 8,660 | 4,182,727 | (247,205) | 3,935,522 | |
| 2026 | 0 | | | | | | | | | | | | | | |

TABLE B-6. Annual Water Quantities Conveyed through Each Pumping and Power Recovery Plant of Project Transportation Facilities

(in acre-feet)

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| Calendar Year | CALIFORNIA AQUEDUCT (continued) | | | | | | | | | | | |
|----------------------|---------------------------------|----------------------------|---------------------------------|-----------------|-----------------|-----------|----------------------------|----------------------------|---------------------------------|-----------------|-----------------|-----------|
| | San Luis Division | | | | | | South San Joaquin Division | | | | | |
| | Dos Amigos Pumping Plant | | | | | | Buena Vista Pumping Plant | | | | | |
| | Initial Fill Water | Opera- tional Losses | Reservoir Storage Changes | Deliveries | | Total | Initial Fill Water | Opera- tional Losses | Reservoir Storage Changes | Deliveries | | Total |
| | | | | Water Supply | Recrea- tion | | | | | Water Supply | Recrea- tion | |
| 1961 | [27] | [28] | [29] | [30] | [31] | [32] | [33] | [34] | [35] | [36] | [37] | [38] |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1968 | 11,079 | 25,126 | 0 | 189,104 | 0 | 225,309 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1969 | 3,887 | 9,922 | 0 | 192,689 | 0 | 206,498 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1970 | 7,668 | 1,901 | 0 | 270,300 | 0 | 279,869 | 4,779 | 1,012 | 0 | 3 | 0 | 5,794 |
| 1971 | 23,207 | (12,030) | 0 | 545,869 | 0 | 557,046 | 7,853 | 8,399 | 0 | 101,512 | 0 | 117,764 |
| 1972 | 145,066 | (6,635) | (6,558) | 886,840 | 6,481 | 1,025,194 | 100,274 | 20,044 | (6,558) | 223,626 | 6,481 | 343,867 |
| 1973 | 214,941 | (6,778) | 1,329 | 635,716 | 1,147 | 846,355 | 204,638 | 35,695 | 1,329 | 311,096 | 1,147 | 553,905 |
| 1974 | 247,894 | (16,765) | (15,295) | 780,513 | 2,108 | 998,455 | 237,554 | 19,672 | (15,295) | 388,949 | 2,108 | 632,888 |
| 1975 | 110,149 | (12,144) | (693) | 1,126,152 | 3,358 | 1,226,822 | 103,352 | 26,342 | (693) | 672,531 | 3,358 | 804,890 |
| 1976 | 67,834 | (456) | (152,171) | 1,241,550 | 1,581 | 1,152,338 | 61,122 | 29,428 | (152,171) | 785,055 | 1,581 | 725,015 |
| 1977 | 0 | 26,359 | (116,219) | 463,970 | 737 | 374,847 | 0 | 25,173 | (116,219) | 271,944 | 5,680 | 181,458 |
| 1978 | 67,457 | 1,905 | 79,308 | 1,335,362 | 680 | 1,484,712 | 65,027 | 17,751 | 121,904 | 762,043 | 674 | 967,399 |
| 1979 | 17,397 | 33,884 | (51,299) | 1,530,926 | 685 | 1,531,593 | 12,302 | 46,157 | (51,299) | 737,714 | 502 | 745,376 |
| 1980 | 3,159 | 34,391 | (272,825) | 1,407,663 | 1,514 | 1,173,902 | 0 | 49,025 | (134,009) | 778,059 | 1,262 | 694,337 |
| 1981 | 46,060 | 36,962 | 23,359 | 1,775,179 | 4,348 | 1,885,908 | 0 | 38,942 | 23,359 | 1,077,322 | 4,112 | 1,143,735 |
| 1982 | 5,979 | 57,146 | 116,086 | 1,631,868 | 4,205 | 1,815,284 | 0 | 29,059 | 117,174 | 990,863 | 4,045 | 1,141,141 |
| 1983 | 6,071 | 63,583 | (101,155) | 1,085,804 | 7,475 | 1,061,778 | 0 | 40,205 | (101,155) | 593,820 | 7,291 | 540,261 |
| 1984 | 38,649 | 109,263 | (112,744) | 1,484,114 | 5,391 | 1,524,673 | 0 | 38,487 | (114,984) | 781,955 | 5,244 | 710,702 |
| 1985 | 0 | 86,772 | 138,898 | 1,858,111 | 4,936 | 2,068,717 | 0 | 42,838 | 139,689 | 992,606 | 4,804 | 1,179,937 |
| 1986 | 0 | 51,963 | 19,989 | 1,877,183 | 3,426 | 1,952,561 | 0 | 36,751 | 37,546 | 1,014,294 | 3,285 | 1,091,876 |
| 1987 | 0 | 64,827 | (25,707) | 1,978,945 | 7,121 | 2,025,186 | 0 | 30,495 | (25,522) | 1,027,361 | 6,937 | 1,039,271 |
| 1988 | 0 | 72,679 | (34,592) | 2,217,126 | 4,490 | 2,259,703 | 0 | 38,804 | (29,747) | 1,244,196 | 4,360 | 1,257,613 |
| 1989 | 0 | 90,090 | (29,411) | 2,679,845 | 7,652 | 2,748,176 | 0 | 29,594 | (60,826) | 1,532,625 | 7,490 | 1,508,883 |
| 1990 | 0 | 115,074 | (11,323) | 2,394,999 | 8,922 | 2,507,672 | 0 | 46,865 | (15,092) | 1,769,991 | 8,879 | 1,810,643 |
| 1991 | 0 | 92,227 | 9,325 | 489,348 | 4,605 | 595,505 | 0 | 39,274 | 96,506 | 446,916 | 4,560 | 587,256 |
| 1992 | 0 | 118,796 | (225,603) | 1,372,536 | 2,079 | 1,267,908 | 0 | 28,138 | (98,271) | 920,978 | 1,995 | 852,840 |
| 1993 | 0 | 136,432 | (220,537) | 2,170,494 | 1,864 | 2,088,253 | 0 | 14,186 | (128,363) | 909,200 | 1,676 | 795,699 |
| 1994 | 0 | 152,414 | (78,957) | 1,724,433 | 3,098 | 1,800,988 | 0 | 35,083 | (88,211) | 1,107,122 | 2,918 | 1,056,912 |
| 1995 | 0 | 137,937 | (12,473) | 1,921,666 | 1,711 | 2,048,841 | 0 | 33,963 | (16,431) | 706,742 | 1,669 | 725,943 |
| 1996 | 0 | 45,591 | 14,927 | 2,425,024 | 2,998 | 2,488,540 | 0 | 31,304 | 15,438 | 988,612 | 2,928 | 1,038,282 |
| 1997 | 527 | 107,033 | (66,814) | 2,247,628 | 2,090 | 2,290,464 | 0 | 42,670 | 40,852 | 1,054,461 | 2,076 | 1,140,059 |
| 1998 | 0 | 95,185 | (338,076) | 1,664,080 | 1,589 | 1,422,778 | 0 | 41,910 | (106,487) | 753,731 | 1,585 | 890,739 |
| 1999 | 0 | 95,262 | (2,778) | 2,750,154 | 3,285 | 2,845,923 | 0 | 48,502 | (2,807) | 1,131,826 | 3,279 | 1,180,800 |
| 2000 | 0 | 134,231 | 7,726 | 3,273,337 | 4,222 | 3,419,516 | 0 | 37,514 | 7,726 | 1,814,685 | 4,216 | 1,864,141 |
| 2001 | 0 | 150,830 | (18,830) | 1,616,833 | 1,218 | 1,750,051 | 0 | 31,361 | (18,830) | 1,138,892 | 1,211 | 1,333,634 |
| 2002 | 0 | 92,905 | 50,342 | 2,630,651 | 3,968 | 2,777,866 | 0 | 41,565 | 50,342 | 1,314,063 | 3,961 | 1,329,931 |
| 2003 | 0 | 85,360 | (48,181) | 2,894,896 | 10,656 | 2,942,731 | 0 | 43,352 | (48,181) | 1,910,755 | 10,645 | 1,916,571 |
| 2004 | 0 | 25,865 | 3,161 | 2,809,831 | 652 | 2,839,509 | 0 | 41,551 | 3,161 | 2,104,377 | 649 | 2,149,738 |
| 2005 | 0 | 62,569 | (159,678) | 3,423,490 | 581 | 3,326,962 | 0 | 35,019 | (159,678) | 1,846,180 | 559 | 1,722,080 |
| 2006 | 0 | (12,341) | (120,122) | 3,501,949 | 504 | 3,369,990 | 0 | 30,271 | (120,122) | 2,077,771 | 504 | 1,988,424 |
| 2007 | 0 | 47,736 | 118,196 | 2,419,032 | 312 | 2,585,276 | 0 | 43,400 | 118,196 | 2,002,793 | 305 | 2,164,694 |
| 2008 | 0 | 103,375 | (4,230) | 1,302,788 | 361 | 1,402,294 | 0 | 39,056 | (4,230) | 1,275,174 | 327 | 1,310,327 |
| 2009 | 0 | 76,208 | (726) | 1,320,081 | 1,367 | 1,396,928 | 0 | 32,900 | (726) | 1,217,852 | 1,295 | 1,251,351 |
| 2010 | 0 | 73,017 | 27,590 | 1,505,262 | 7,210 | 1,613,079 | 0 | 43,555 | 27,590 | 1,072,077 | 7,010 | 1,150,232 |
| 2011 | 0 | 73,100 | 1,035 | 3,374,771 | 7,210 | 3,456,116 | 0 | 43,638 | 1,035 | 2,339,660 | 7,010 | 2,391,343 |
| 2012 | 0 | 73,146 | 1,930 | 3,371,848 | 7,210 | 3,454,134 | 0 | 43,684 | 1,930 | 2,338,945 | 7,010 | 2,391,569 |
| 2013 | 0 | 70,217 | 9,749 | 3,376,712 | 7,210 | 3,463,888 | 0 | 40,755 | 9,749 | 2,343,809 | 7,010 | 2,401,323 |
| 2014 | 0 | 70,525 | 16,625 | 3,402,326 | 7,210 | 3,496,686 | 0 | 41,063 | 16,625 | 2,369,423 | 7,010 | 2,434,121 |
| 2015 | 0 | 70,654 | 32,003 | 3,864,952 | 7,210 | 3,974,819 | 0 | 41,192 | 32,003 | 2,800,939 | 7,010 | 2,881,144 |
| 2016 | 0 | 70,354 | (28,401) | 3,864,952 | 7,210 | 3,914,115 | 0 | 40,892 | (28,401) | 2,800,939 | 7,010 | 2,820,440 |
| 2017 | 0 | 70,586 | 61,309 | 3,864,952 | 7,210 | 4,004,057 | 0 | 41,124 | 61,309 | 2,800,939 | 7,010 | 2,910,382 |
| 2018 | 0 | 70,740 | (80,817) | 3,864,952 | 7,210 | 3,862,085 | 0 | 41,278 | (80,817) | 2,800,939 | 7,010 | 2,768,410 |
| 2019 | 0 | 70,564 | 50,179 | 3,864,952 | 7,210 | 3,992,905 | 0 | 41,102 | 50,179 | 2,800,939 | 7,010 | 2,899,230 |
| 2020 | 0 | 70,628 | (366) | 3,864,952 | 7,210 | 3,942,424 | 0 | 41,166 | (366) | 2,804,939 | 7,010 | 2,852,749 |
| 2021 | 0 | 70,711 | 10,725 | 3,864,952 | 7,210 | 3,953,598 | 0 | 41,249 | 10,725 | 2,804,939 | 7,010 | 2,863,923 |
| 2022 | 0 | 70,705 | (3,483) | 3,864,952 | 7,210 | 3,939,384 | 0 | 41,243 | (3,483) | 2,804,939 | 7,010 | 2,849,709 |
| 2023 | 0 | 70,696 | (18,971) | 3,864,952 | 7,210 | 3,923,887 | 0 | 41,234 | (18,971) | 2,804,939 | 7,010 | 2,834,212 |
| 2024 | 0 | 70,575 | 11,289 | 3,864,952 | 7,210 | 3,954,026 | 0 | 41,113 | 11,289 | 2,804,939 | 7,010 | 2,864,351 |
| 2025 | 0 | 70,638 | (12,518) | 3,864,952 | 7,210 | 3,930,282 | 0 | 41,176 | (12,518) | 2,804,939 | 7,010 | 2,840,607 |
| 2026 | 0 | 70,650 | 24,308 | 3,864,952 | 7,210 | 3,967,120 | 0 | 41,188 | 24,308 | 2,804,939 | 7,010 | 2,877,445 |
| 2027 | 0 | 70,563 | (17,799) | 3,864,952 | 7,210 | 3,924,926 | 0 | 41,101 | (17,799) | 2,804,939 | 7,010 | 2,835,251 |
| 2028 | 0 | 70,703 | 12,291 | 3,864,952 | 7,210 | 3,955,156 | 0 | 41,241 | 12,291 | 2,804,939 | 7,010 | 2,865,481 |
| 2029 | 0 | 70,630 | (9,046) | 3,864,952 | 7,210 | 3,933,746 | 0 | 41,168 | (9,046) | 2,804,939 | 7,010 | 2,844,071 |
| 2030 | 0 | 70,694 | 20,756 | 3,864,952 | 7,210 | 3,963,612 | 0 | 41,232 | 20,756 | 2,804,939 | 7,010 | 2,873,937 |
| 2031 | 0 | 70,566 | (97,726) | 3,864,952 | 7,210 | 3,845,002 | 0 | 41,104 | (97,726) | 2,804,939 | 7,010 | 2,755,327 |
| 2032 | 0 | 70,168 | 84,999 | 3,864,952 | 7,210 | 4,027,329 | 0 | 40,706 | 84,999 | 2,804,939 | 7,010 | 2,937,654 |
| 2033 | 0 | 70,373 | (94,652) | 3,864,952 | 7,210 | 3,847,883 | 0 | 40,911 | (94,652) | 2,804,939 | 7,010 | 2,758,208 |
| 2034 | 0 | 69,865 | 69,593 | 3,864,952 | 7,210 | 4,011,620 | 0 | 40,403 | 69,593 | 2,804,939 | 7,010 | 2,921,945 |
| 2035 | 0 | 69,205 | (242,659) | 3,864,952 | 7,210 | 3,698,708 | 0 | 39,743 | (242,659) | 2,804,939 | 7,010 | 2,609,033 |

TABLE B-6. Annual Water Quantities Conveyed through Each Pumping and Power Recovery Plant of Project Transportation Facilities

(in acre-feet)

Sheet 4 of 10

| Calendar Year | CALIFORNIA AQUEDUCT (continued) | | | | | | | | | | | |
|----------------------|--|----------------------------|---------------------------------|-----------------|-----------------|-----------|--------------------------|----------------------------|---------------------------------|-----------------|--------|-----------|
| | South San Joaquin Division (continued) | | | | | | | | | | | |
| | Teerink Pumping Plant | | | | | | Chrisman Pumping Plant | | | | | |
| | Initial Fill Water | Opera- tional Losses | Reservoir Storage Changes | Deliveries | | Total | Initial Fill Water | Opera- tional Losses | Reservoir Storage Changes | Deliveries | | Total |
| Water Supply | | | | Recrea- tion | Water Supply | | | | | Recrea- tion | | |
| | [39] | [40] | [41] | [42] | [43] | [44] | [45] | [46] | [47] | [48] | [49] | [50] |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1968 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1969 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1970 | 198 | 2 | 0 | 0 | 0 | 200 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1971 | 7,533 | (112) | 0 | 3,552 | 0 | 10,973 | 7,366 | (159) | 0 | 0 | 0 | 7,207 |
| 1972 | 100,274 | 12,765 | (6,558) | 84,955 | 6,481 | 197,917 | 100,274 | 13,160 | (6,558) | 78,891 | 6,481 | 192,248 |
| 1973 | 204,638 | 21,543 | 1,329 | 229,685 | 1,147 | 458,342 | 204,638 | 32,414 | 1,329 | 209,769 | 1,147 | 449,297 |
| 1974 | 237,554 | 11,843 | (15,295) | 336,198 | 2,108 | 572,408 | 237,554 | 17,655 | (15,295) | 318,198 | 2,108 | 560,220 |
| 1975 | 103,352 | 19,763 | (693) | 621,706 | 3,358 | 747,486 | 103,352 | 25,326 | (693) | 586,286 | 3,358 | 717,629 |
| 1976 | 61,122 | 18,552 | (152,171) | 740,486 | 1,581 | 669,570 | 61,122 | 21,468 | (152,171) | 700,935 | 1,581 | 632,935 |
| 1977 | 0 | 16,415 | (116,219) | 246,349 | 560 | 147,105 | 0 | 15,698 | (116,219) | 240,191 | 560 | 140,230 |
| 1978 | 65,027 | 28,820 | 121,904 | 631,121 | 674 | 847,546 | 65,027 | 26,705 | 121,904 | 599,973 | 674 | 814,283 |
| 1979 | 12,302 | 50,663 | (51,299) | 625,561 | 502 | 637,729 | 12,302 | 50,580 | (51,299) | 586,959 | 502 | 599,044 |
| 1980 | 0 | 48,825 | (134,009) | 696,405 | 1,262 | 612,483 | 0 | 58,085 | (134,009) | 658,588 | 1,262 | 583,926 |
| 1981 | 0 | 51,600 | 23,359 | 998,307 | 4,112 | 1,077,378 | 0 | 48,844 | 23,359 | 959,274 | 4,112 | 1,035,589 |
| 1982 | 0 | 44,353 | 117,332 | 878,486 | 4,045 | 1,044,216 | 0 | 33,541 | 117,277 | 830,704 | 4,045 | 985,567 |
| 1983 | 0 | 43,961 | (101,155) | 487,915 | 7,291 | 438,012 | 0 | 34,698 | (101,155) | 450,489 | 7,291 | 391,323 |
| 1984 | 0 | 45,999 | (115,088) | 632,262 | 5,244 | 568,417 | 0 | 33,132 | (115,092) | 582,414 | 5,244 | 505,698 |
| 1985 | 0 | 50,106 | 139,973 | 854,684 | 4,804 | 1,049,567 | 0 | 54,831 | 139,954 | 810,606 | 4,804 | 1,010,195 |
| 1986 | 0 | 38,747 | 37,546 | 882,300 | 3,285 | 961,878 | 0 | 41,421 | 37,546 | 839,839 | 3,285 | 922,091 |
| 1987 | 0 | 47,815 | (25,522) | 897,905 | 6,937 | 927,135 | 0 | 33,195 | (25,522) | 863,157 | 6,937 | 877,767 |
| 1988 | 0 | 53,815 | (29,747) | 1,097,643 | 4,360 | 1,126,071 | 0 | 39,775 | (29,747) | 1,055,649 | 4,360 | 1,070,037 |
| 1989 | 0 | 49,088 | (60,826) | 1,382,599 | 7,490 | 1,378,351 | 0 | 42,307 | (60,826) | 1,339,358 | 7,490 | 1,328,329 |
| 1990 | 0 | 66,868 | (15,092) | 1,627,246 | 8,879 | 1,687,901 | 0 | 56,663 | (15,092) | 1,590,893 | 8,879 | 1,641,343 |
| 1991 | 0 | 40,564 | 105,176 | 446,148 | 4,560 | 596,448 | 0 | 34,016 | 105,176 | 446,148 | 4,560 | 589,900 |
| 1992 | 0 | 31,820 | (92,123) | 844,376 | 1,995 | 786,068 | 0 | 34,477 | (92,123) | 820,133 | 1,995 | 764,482 |
| 1993 | 0 | 27,158 | (127,738) | 799,143 | 1,676 | 700,239 | 0 | 28,614 | (127,738) | 771,146 | 1,676 | 673,698 |
| 1994 | 0 | 50,802 | (88,211) | 1,007,214 | 2,918 | 972,723 | 0 | 57,203 | (88,211) | 977,703 | 2,918 | 949,613 |
| 1995 | 0 | 48,705 | (16,431) | 586,829 | 1,669 | 620,772 | 0 | 36,309 | (16,431) | 560,695 | 1,669 | 582,242 |
| 1996 | 0 | 58,437 | 15,438 | 836,819 | 2,928 | 913,622 | 0 | 43,710 | 15,438 | 800,633 | 2,928 | 862,709 |
| 1997 | 0 | 73,656 | 40,852 | 918,124 | 2,076 | 1,034,708 | 0 | 62,275 | 40,852 | 881,843 | 2,076 | 987,046 |
| 1998 | 0 | 61,137 | (106,487) | 656,796 | 1,585 | 613,031 | 0 | 47,523 | (106,487) | 628,084 | 1,585 | 570,705 |
| 1999 | 0 | 77,334 | (2,807) | 1,011,608 | 3,279 | 1,089,414 | 0 | 55,514 | (2,807) | 974,807 | 3,279 | 1,030,793 |
| 2000 | 0 | 87,084 | 7,726 | 1,691,120 | 4,216 | 1,790,146 | 0 | 49,690 | 7,726 | 1,651,057 | 4,216 | 1,712,689 |
| 2001 | 0 | 71,588 | (18,830) | 1,234,919 | 1,211 | 1,288,888 | 0 | 54,742 | (18,830) | 1,203,727 | 1,211 | 1,240,850 |
| 2002 | 0 | 108,309 | 50,342 | 1,743,002 | 3,961 | 1,905,614 | 0 | 69,443 | 50,342 | 1,701,450 | 3,961 | 1,825,196 |
| 2003 | 0 | 106,973 | (48,181) | 1,827,180 | 10,645 | 1,896,617 | 0 | 57,291 | (48,181) | 1,790,578 | 10,645 | 1,810,333 |
| 2004 | 0 | 122,559 | 3,161 | 2,034,534 | 649 | 2,160,903 | 0 | 60,847 | 3,161 | 1,994,350 | 649 | 2,059,007 |
| 2005 | 0 | 99,523 | (159,678) | 1,751,799 | 559 | 1,692,203 | 0 | 53,502 | (159,678) | 1,711,929 | 559 | 1,606,312 |
| 2006 | 0 | 128,022 | (120,122) | 1,967,804 | 504 | 1,976,208 | 0 | 46,463 | (120,122) | 1,921,560 | 504 | 1,848,405 |
| 2007 | 0 | 139,502 | 118,196 | 1,910,800 | 305 | 2,168,803 | 0 | 59,454 | 118,196 | 1,863,410 | 305 | 2,041,365 |
| 2008 | 0 | 97,209 | (4,230) | 1,201,345 | 327 | 1,294,651 | 0 | 51,709 | (4,230) | 1,168,316 | 327 | 1,216,122 |
| 2009 | 0 | 88,574 | (726) | 1,169,482 | 1,295 | 1,258,625 | 0 | 43,229 | (726) | 1,146,263 | 1,295 | 1,190,061 |
| 2010 | 0 | 39,925 | 27,590 | 992,359 | 7,010 | 1,066,884 | 0 | 39,675 | 27,590 | 966,385 | 7,010 | 1,040,660 |
| 2011 | 0 | 40,008 | 1,035 | 2,215,160 | 7,010 | 2,263,213 | 0 | 39,758 | 1,035 | 2,162,160 | 7,010 | 2,209,963 |
| 2012 | 0 | 40,054 | 1,930 | 2,214,445 | 7,010 | 2,263,439 | 0 | 39,804 | 1,930 | 2,161,445 | 7,010 | 2,210,189 |
| 2013 | 0 | 37,125 | 9,749 | 2,219,309 | 7,010 | 2,273,193 | 0 | 36,875 | 9,749 | 2,166,309 | 7,010 | 2,219,943 |
| 2014 | 0 | 37,433 | 16,625 | 2,244,923 | 7,010 | 2,305,991 | 0 | 37,183 | 16,625 | 2,191,923 | 7,010 | 2,252,741 |
| 2015 | 0 | 37,562 | 32,003 | 2,676,439 | 7,010 | 2,753,014 | 0 | 37,312 | 32,003 | 2,623,439 | 7,010 | 2,699,764 |
| 2016 | 0 | 37,262 | (28,401) | 2,676,439 | 7,010 | 2,692,310 | 0 | 37,012 | (28,401) | 2,623,439 | 7,010 | 2,639,060 |
| 2017 | 0 | 37,494 | 61,309 | 2,676,439 | 7,010 | 2,782,252 | 0 | 37,244 | 61,309 | 2,623,439 | 7,010 | 2,729,002 |
| 2018 | 0 | 37,648 | (80,817) | 2,676,439 | 7,010 | 2,640,280 | 0 | 37,398 | (80,817) | 2,623,439 | 7,010 | 2,587,030 |
| 2019 | 0 | 37,472 | 50,179 | 2,676,439 | 7,010 | 2,771,100 | 0 | 37,222 | 50,179 | 2,623,439 | 7,010 | 2,717,850 |
| 2020 | 0 | 37,536 | (366) | 2,680,439 | 7,010 | 2,724,619 | 0 | 37,286 | (366) | 2,627,439 | 7,010 | 2,671,369 |
| 2021 | 0 | 37,619 | 10,725 | 2,680,439 | 7,010 | 2,735,793 | 0 | 37,369 | 10,725 | 2,627,439 | 7,010 | 2,682,543 |
| 2022 | 0 | 37,613 | (3,483) | 2,680,439 | 7,010 | 2,721,579 | 0 | 37,363 | (3,483) | 2,627,439 | 7,010 | 2,668,329 |
| 2023 | 0 | 37,604 | (18,971) | 2,680,439 | 7,010 | 2,706,082 | 0 | 37,354 | (18,971) | 2,627,439 | 7,010 | 2,652,832 |
| 2024 | 0 | 37,483 | 11,289 | 2,680,439 | 7,010 | 2,736,221 | 0 | 37,233 | 11,289 | 2,627,439 | 7,010 | 2,682,971 |
| 2025 | 0 | 37,546 | (12,518) | 2,680,439 | 7,010 | 2,712,477 | 0 | 37,296 | (12,518) | 2,627,439 | 7,010 | 2,659,227 |
| 2026 | 0 | 37,558 | 24,308 | 2,680,439 | 7,010 | 2,749,315 | 0 | 37,308 | 24,308 | 2,627,439 | 7,010 | 2,696,065 |
| 2027 | 0 | 37,471 | (17,799) | 2,680,439 | 7,010 | 2,707,121 | 0 | 37,221 | (17,799) | 2,627,439 | 7,010 | 2,653,871 |
| 2028 | 0 | 37,611 | 12,291 | 2,680,439 | 7,010 | 2,737,351 | 0 | 37,361 | 12,291 | 2,627,439 | 7,010 | 2,684,101 |
| 2029 | 0 | 37,538 | (9,046) | 2,680,439 | 7,010 | 2,715,941 | 0 | 37,288 | (9,046) | 2,627,439 | 7,010 | 2,662,691 |
| 2030 | 0 | 37,602 | 20,756 | 2,680,439 | 7,010 | 2,745,807 | 0 | 37,352 | 20,756 | 2,627,439 | 7,010 | 2,692,557 |
| 2031 | 0 | 37,474 | (97,726) | 2,680,439 | 7,010 | 2,627,197 | 0 | 37,224 | (97,726) | 2,627,439 | 7,010 | 2,573,947 |
| 2032 | 0 | 37,076 | 84,999 | 2,680,439 | 7,010 | 2,809,524 | 0 | 36,826 | 84,999 | 2,627,439 | 7,010 | 2,756,274 |
| 2033 | 0 | 37,281 | (94,652) | 2,680,439 | 7,010 | 2,630,078 | 0 | 37,031 | (94,652) | 2,627,439 | 7,010 | 2,576,828 |
| 2034 | 0 | 36,773 | 69,593 | 2,680,439 | 7,010 | 2,793,815 | 0 | 36,523 | 69,593 | 2,627,439 | 7,010 | 2,740,565 |
| 2035 | 0 | 36,113 | (242,659) | 2,680,439 | 7,010 | 2,480,903 | 0 | 35,863 | (242,659) | 2,627,439 | 7,010 | 2,427,653 |

TABLE B-6. Annual Water Quantities Conveyed through Each Pumping and Power Recovery Plant of Project Transportation Facilities

(in acre-feet)

Sheet 5 of 10

| Calendar Year | CALIFORNIA AQUEDUCT (continued) | | | | | | | | | | | |
|----------------------|---------------------------------|----------------------------|---------------------------------|-----------------|--------|-----------|--------------------------|----------------------------|---------------------------------|-----------------|-----------------|-----------|
| | Tehachapi Division | | | | | | Mojave Division | | | | | |
| | Edmonston Pumping Plant | | | | | | Alamo Powerplant | | | | | |
| | Initial Fill Water | Opera- tional Losses | Reservoir Storage Changes | Deliveries | | Total | Initial Fill Water | Opera- tional Losses | Reservoir Storage Changes | Deliveries | | Total |
| | | | Water Supply | Recrea- tion | | | | | | Water Supply | Recrea- tion | |
| | [51] | [52] | [53] | [54] | [55] | [56] | [57] | [58] | [59] | [60] | [61] | [62] |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1968 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1969 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1970 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1971 | 5,446 | 8 | 0 | 0 | 0 | 5,454 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1972 | 100,274 | 16,067 | (6,558) | 74,123 | 6,481 | 190,387 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1973 | 204,638 | 34,051 | 1,329 | 207,808 | 1,147 | 448,973 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1974 | 237,554 | 18,181 | (15,295) | 313,634 | 2,108 | 556,182 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1975 | 103,352 | 20,183 | (693) | 573,219 | 3,358 | 699,419 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1976 | 61,122 | 21,096 | (152,171) | 685,768 | 1,581 | 617,396 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1977 | 0 | 18,424 | (116,219) | 236,086 | 560 | 138,851 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1978 | 65,027 | 20,887 | 121,904 | 590,329 | 674 | 798,821 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1979 | 12,302 | 46,332 | (51,299) | 568,338 | 502 | 576,175 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1980 | 0 | 52,967 | (134,009) | 639,743 | 1,262 | 559,963 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1981 | 0 | 40,602 | 23,359 | 938,482 | 4,112 | 1,006,555 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1982 | 0 | 37,244 | 117,296 | 812,206 | 4,045 | 970,791 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1983 | 0 | 40,690 | (101,155) | 431,182 | 7,291 | 378,008 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1984 | 0 | 42,112 | (115,214) | 556,830 | 5,244 | 488,972 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1985 | 0 | 45,265 | 139,988 | 792,477 | 4,804 | 982,534 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1986 | 0 | 36,918 | 37,546 | 823,067 | 3,285 | 900,816 | 0 | 14,735 | 12,258 | 429,864 | 1,508 | 458,365 |
| 1987 | 0 | 29,580 | (25,522) | 851,322 | 6,937 | 862,317 | 0 | 11,665 | (15,270) | 417,870 | 1,239 | 415,504 |
| 1988 | 0 | 42,017 | (29,747) | 1,044,737 | 4,360 | 1,061,367 | 0 | 21,696 | 1,101 | 537,568 | 971 | 561,336 |
| 1989 | 0 | 32,270 | (60,826) | 1,328,041 | 7,490 | 1,306,975 | 0 | 4,686 | (20,363) | 716,360 | 1,407 | 702,090 |
| 1990 | 0 | 42,198 | (15,092) | 1,579,466 | 8,879 | 1,615,451 | 0 | 8,898 | (5,916) | 788,111 | 1,388 | 792,481 |
| 1991 | 0 | 33,999 | 105,176 | 441,217 | 4,560 | 584,952 | 0 | 17,908 | 34,422 | 177,308 | 394 | 230,032 |
| 1992 | 0 | 23,121 | (92,123) | 809,771 | 1,995 | 742,764 | 0 | 14,873 | (17,115) | 374,110 | 423 | 372,291 |
| 1993 | 0 | 11,946 | (127,738) | 759,485 | 1,676 | 645,369 | 0 | 9,304 | (3,455) | 308,222 | 443 | 314,514 |
| 1994 | 0 | 40,808 | (88,211) | 960,815 | 2,918 | 916,330 | 0 | 21,837 | 3,395 | 469,996 | 430 | 495,658 |
| 1995 | 0 | 36,001 | (16,431) | 542,465 | 1,669 | 563,704 | 0 | 14,139 | (30,761) | 384,836 | 427 | 368,641 |
| 1996 | 0 | 37,357 | 15,438 | 779,918 | 2,928 | 835,641 | 0 | 7,247 | (11,410) | 493,852 | 565 | 490,254 |
| 1997 | 0 | 51,475 | 40,852 | 860,798 | 2,076 | 955,201 | 0 | 20,725 | 38,960 | 537,586 | 507 | 597,778 |
| 1998 | 0 | 48,601 | (106,487) | 607,301 | 1,585 | 551,000 | 0 | 21,456 | 16,361 | 398,385 | 363 | 436,565 |
| 1999 | 0 | 52,726 | (2,807) | 947,420 | 3,279 | 1,000,618 | 0 | 26,644 | (8,486) | 589,756 | 396 | 608,310 |
| 2000 | 0 | 43,072 | 7,726 | 1,627,123 | 4,216 | 1,682,137 | 0 | 8,983 | (10,472) | 958,997 | 449 | 957,957 |
| 2001 | 0 | 39,544 | (18,830) | 1,188,357 | 1,211 | 1,210,282 | 0 | 14,526 | 3,478 | 711,042 | 452 | 729,498 |
| 2002 | 0 | 60,037 | 50,342 | 1,682,703 | 3,961 | 1,797,043 | 0 | 15,190 | 8,398 | 903,419 | 490 | 927,497 |
| 2003 | 0 | 53,320 | (48,181) | 1,772,611 | 10,645 | 1,788,395 | 0 | 13,676 | (20,787) | 1,036,912 | 355 | 1,030,156 |
| 2004 | 0 | 57,962 | 3,161 | 1,972,397 | 649 | 2,034,169 | 0 | 15,581 | 17,207 | 1,122,390 | 171 | 1,155,349 |
| 2005 | 0 | 40,949 | (159,678) | 1,693,409 | 559 | 1,575,239 | 0 | 2,561 | (50,014) | 1,116,158 | 84 | 1,068,789 |
| 2006 | 0 | 52,291 | (120,122) | 1,898,711 | 504 | 1,831,384 | 0 | 13,170 | 8,653 | 1,282,165 | 98 | 1,304,086 |
| 2007 | 0 | 65,423 | 118,196 | 1,836,977 | 305 | 2,020,901 | 0 | 17,957 | (5,091) | 1,076,227 | 103 | 1,089,196 |
| 2008 | 0 | 50,959 | (4,230) | 1,146,056 | 327 | 1,193,112 | 0 | 14,592 | 5,383 | 614,224 | 80 | 634,279 |
| 2009 | 0 | 59,186 | (726) | 1,125,659 | 1,295 | 1,185,414 | 0 | 25,599 | (5,619) | 493,690 | 1,100 | 514,770 |
| 2010 | 0 | 38,125 | 27,590 | 941,122 | 7,010 | 1,013,847 | 0 | 20,768 | 7,680 | 473,331 | 1,630 | 503,409 |
| 2011 | 0 | 38,208 | 1,035 | 2,135,102 | 7,010 | 2,181,355 | 0 | 20,820 | (1,038) | 1,266,240 | 1,630 | 1,287,652 |
| 2012 | 0 | 38,254 | 1,930 | 2,134,387 | 7,010 | 2,181,581 | 0 | 20,866 | (142) | 1,264,925 | 1,630 | 1,287,279 |
| 2013 | 0 | 35,325 | 9,749 | 2,139,251 | 7,010 | 2,191,335 | 0 | 20,835 | 4,742 | 1,269,189 | 1,630 | 1,296,396 |
| 2014 | 0 | 35,633 | 16,625 | 2,164,865 | 7,010 | 2,224,133 | 0 | 21,002 | 2,759 | 1,290,803 | 1,630 | 1,316,194 |
| 2015 | 0 | 35,762 | 32,003 | 2,596,381 | 7,010 | 2,671,156 | 0 | 21,066 | 22,604 | 1,462,119 | 1,630 | 1,507,419 |
| 2016 | 0 | 35,462 | (28,401) | 2,596,381 | 7,010 | 2,610,452 | 0 | 20,829 | (21,084) | 1,462,119 | 1,630 | 1,463,494 |
| 2017 | 0 | 35,694 | 61,309 | 2,596,381 | 7,010 | 2,700,394 | 0 | 20,895 | 33,266 | 1,462,119 | 1,630 | 1,517,910 |
| 2018 | 0 | 35,848 | (80,817) | 2,596,381 | 7,010 | 2,558,422 | 0 | 20,998 | (50,078) | 1,462,119 | 1,630 | 1,434,669 |
| 2019 | 0 | 35,672 | 50,179 | 2,596,381 | 7,010 | 2,689,242 | 0 | 20,924 | 31,508 | 1,462,119 | 1,630 | 1,516,181 |
| 2020 | 0 | 35,736 | (366) | 2,600,381 | 7,010 | 2,642,761 | 0 | 20,947 | (3,398) | 1,466,119 | 1,630 | 1,485,298 |
| 2021 | 0 | 35,819 | 10,725 | 2,600,381 | 7,010 | 2,653,935 | 0 | 20,946 | (1,117) | 1,466,119 | 1,630 | 1,487,578 |
| 2022 | 0 | 35,813 | (3,483) | 2,600,381 | 7,010 | 2,639,721 | 0 | 20,940 | (3,434) | 1,466,119 | 1,630 | 1,485,255 |
| 2023 | 0 | 35,804 | (18,971) | 2,600,381 | 7,010 | 2,624,224 | 0 | 20,939 | (18,638) | 1,466,119 | 1,630 | 1,470,050 |
| 2024 | 0 | 35,683 | 11,289 | 2,600,381 | 7,010 | 2,654,363 | 0 | 20,881 | 21,309 | 1,466,119 | 1,630 | 1,509,939 |
| 2025 | 0 | 35,746 | (12,518) | 2,600,381 | 7,010 | 2,630,619 | 0 | 20,965 | (11,624) | 1,466,119 | 1,630 | 1,477,090 |
| 2026 | 0 | 35,758 | 24,308 | 2,600,381 | 7,010 | 2,667,457 | 0 | 20,930 | 13,030 | 1,466,119 | 1,630 | 1,501,709 |
| 2027 | 0 | 35,671 | (17,799) | 2,600,381 | 7,010 | 2,625,263 | 0 | 20,861 | (6,161) | 1,466,119 | 1,630 | 1,482,449 |
| 2028 | 0 | 35,811 | 12,291 | 2,600,381 | 7,010 | 2,655,493 | 0 | 20,961 | 4,006 | 1,466,119 | 1,630 | 1,492,716 |
| 2029 | 0 | 35,738 | (9,046) | 2,600,381 | 7,010 | 2,634,083 | 0 | 20,955 | (913) | 1,466,119 | 1,630 | 1,487,791 |
| 2030 | 0 | 35,802 | 20,756 | 2,600,381 | 7,010 | 2,663,949 | 0 | 20,930 | 8,528 | 1,466,119 | 1,630 | 1,497,207 |
| 2031 | 0 | 35,674 | (97,726) | 2,600,381 | 7,010 | 2,545,339 | 0 | 20,956 | (31,057) | 1,466,119 | 1,630 | 1,457,648 |
| 2032 | 0 | 35,276 | 84,999 | 2,600,381 | 7,010 | 2,727,666 | 0 | 20,865 | 43,953 | 1,466,119 | 1,630 | 1,532,567 |
| 2033 | 0 | 35,481 | (94,652) | 2,600,381 | 7,010 | 2,548,220 | 0 | 20,854 | (37,929) | 1,466,119 | 1,630 | 1,450,674 |
| 2034 | 0 | 34,973 | 69,593 | 2,600,381 | 7,010 | 2,711,957 | 0 | 20,769 | 28,588 | 1,466,119 | 1,630 | 1,517,106 |
| 2035 | 0 | 34,313 | (242,659) | 2,600,381 | 7,010 | 2,399,045 | 0 | 20,892 | (49,219) | 1,466,119 | 1,630 | 1,439,422 |

TABLE B-6. Annual Water Quantities Conveyed through Each Pumping and Power Recovery Plant of Project Transportation Facilities

(in acre-feet)

Sheet 6 of 10

| Calendar Year | CALIFORNIA AQUEDUCT (continued) | | | | | | | | | | | |
|----------------------|---------------------------------|----------------------------|---------------------------------|-----------------|-------|-----------|--------------------------|----------------------------|---------------------------------|-----------------|-------|-----------|
| | Mojave Division (continued) | | | | | | | | | | | |
| | Pearblossom Pumping Plant | | | | | | Mojave Siphon Powerplant | | | | | |
| | Initial Fill Water | Opera- tional Losses | Reservoir Storage Changes | Deliveries | | Total | Initial Fill Water | Opera- tional Losses | Reservoir Storage Changes | Deliveries | | Total |
| | | | Water Supply | Recrea- tion | | | | | Water Supply | Recrea- tion | | |
| | [63] | [64] | [65] | [66] | [67] | [68] | [69] | [70] | [71] | [72] | [73] | [74] |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1968 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1969 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1970 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1971 | 21 | 0 | 0 | 0 | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1972 | 35,243 | 5,282 | (153) | 1,794 | 0 | 42,166 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1973 | 80,177 | 21,522 | (2,700) | 52,201 | 72 | 151,272 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1974 | 76,694 | 10,847 | (11,149) | 102,839 | 44 | 179,275 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1975 | 10,000 | 2,364 | (8,397) | 190,351 | 70 | 194,388 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1976 | 4,168 | 7,040 | (16,055) | 236,713 | 152 | 232,018 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1977 | 0 | 11,398 | (17,534) | 102,326 | 580 | 96,770 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1978 | 19,922 | 5,696 | 69,130 | 374,845 | 498 | 470,091 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1979 | 12,302 | 6,836 | (32,518) | 362,114 | 502 | 349,236 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1980 | 0 | 16,200 | 6,159 | 401,214 | 781 | 424,354 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1981 | 0 | 4,992 | (36,278) | 574,573 | 933 | 544,220 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1982 | 0 | 5,251 | 55,232 | 401,037 | 1,919 | 463,439 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1983 | 0 | 11,745 | (26,847) | 231,188 | 1,180 | 217,266 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1984 | 0 | 18,228 | 23,230 | 252,066 | 1,494 | 295,018 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1985 | 0 | 25,292 | (2,815) | 350,758 | 1,076 | 374,311 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1986 | 0 | 30,876 | 12,258 | 394,156 | 1,508 | 438,798 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1987 | 0 | 27,552 | (15,270) | 377,531 | 1,239 | 391,052 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1988 | 0 | 32,209 | 1,101 | 501,300 | 971 | 535,581 | 0 | 1,977 | 1,101 | 501,291 | 971 | 505,340 |
| 1989 | 0 | 31,500 | (20,363) | 661,189 | 1,407 | 673,733 | 0 | 29,110 | (20,363) | 661,100 | 1,407 | 671,254 |
| 1990 | 0 | 32,672 | (5,916) | 730,560 | 1,388 | 758,704 | 0 | 23,692 | (5,916) | 730,550 | 1,388 | 749,714 |
| 1991 | 0 | 15,209 | 34,774 | 163,913 | 394 | 214,290 | 0 | (543) | 34,774 | 163,913 | 394 | 198,538 |
| 1992 | 0 | 13,989 | (17,451) | 338,249 | 423 | 335,210 | 0 | (13,193) | (17,451) | 338,207 | 423 | 307,986 |
| 1993 | 0 | 9,779 | (3,455) | 255,117 | 443 | 261,884 | 0 | (11,922) | (3,455) | 255,117 | 443 | 240,183 |
| 1994 | 0 | 150 | 3,395 | 409,928 | 430 | 413,903 | 0 | 1,601 | 3,395 | 395,294 | 430 | 400,720 |
| 1995 | 0 | 6,820 | (29,282) | 328,882 | 427 | 306,847 | 0 | 10,458 | (29,282) | 321,387 | 427 | 302,990 |
| 1996 | 0 | 9,514 | (11,410) | 424,252 | 565 | 422,921 | 0 | (5,577) | (11,410) | 418,141 | 565 | 401,719 |
| 1997 | 0 | (1,124) | 38,960 | 461,563 | 507 | 499,906 | 0 | 5,171 | 38,960 | 452,525 | 507 | 497,163 |
| 1998 | 0 | (2,087) | 16,361 | 334,965 | 363 | 349,602 | 0 | 11,496 | 16,361 | 332,385 | 363 | 360,605 |
| 1999 | 0 | (1,154) | (8,486) | 505,624 | 396 | 496,380 | 0 | 11,065 | (8,486) | 498,919 | 396 | 501,894 |
| 2000 | 0 | (23,296) | (10,472) | 864,999 | 449 | 831,680 | 0 | 4,896 | (10,472) | 854,980 | 449 | 849,853 |
| 2001 | 0 | (9,304) | 3,478 | 636,373 | 452 | 630,999 | 0 | 7,403 | 3,478 | 633,477 | 452 | 644,810 |
| 2002 | 0 | 3,810 | 8,398 | 825,879 | 490 | 838,577 | 0 | 9,300 | 8,398 | 822,406 | 490 | 840,594 |
| 2003 | 0 | 2,814 | (20,787) | 964,051 | 355 | 946,433 | 0 | (6,586) | (20,787) | 943,276 | 355 | 916,258 |
| 2004 | 0 | (15,558) | 17,207 | 1,049,527 | 171 | 1,051,347 | 0 | 5,034 | 17,207 | 1,037,321 | 171 | 1,059,733 |
| 2005 | 0 | (18,967) | (50,014) | 1,043,564 | 84 | 974,667 | 0 | 827 | (50,014) | 1,025,453 | 84 | 976,350 |
| 2006 | 0 | (21,986) | 8,653 | 1,188,268 | 98 | 1,175,033 | 0 | (845) | 8,653 | 1,155,275 | 98 | 1,163,181 |
| 2007 | 0 | (13,055) | (5,091) | 975,802 | 103 | 957,759 | 0 | 3,060 | (5,091) | 956,281 | 103 | 954,353 |
| 2008 | 0 | 723 | 5,383 | 550,143 | 80 | 556,329 | 0 | 8,380 | 5,383 | 534,480 | 80 | 548,323 |
| 2009 | 0 | 3,807 | (5,619) | 431,294 | 1,100 | 430,582 | 0 | 10,520 | (5,619) | 411,080 | 1,100 | 417,081 |
| 2010 | 0 | 15,418 | 7,680 | 373,435 | 1,430 | 397,963 | 0 | 11,948 | 7,680 | 351,799 | 1,430 | 372,857 |
| 2011 | 0 | 15,470 | (1,038) | 1,172,489 | 1,430 | 1,188,351 | 0 | 12,000 | (1,038) | 1,091,009 | 1,430 | 1,103,401 |
| 2012 | 0 | 15,516 | (142) | 1,169,109 | 1,430 | 1,185,913 | 0 | 12,046 | (142) | 1,087,629 | 1,430 | 1,100,963 |
| 2013 | 0 | 15,485 | 4,742 | 1,171,249 | 1,430 | 1,192,906 | 0 | 12,015 | 4,742 | 1,089,769 | 1,430 | 1,107,956 |
| 2014 | 0 | 15,652 | 2,759 | 1,190,669 | 1,430 | 1,210,510 | 0 | 12,182 | 2,759 | 1,110,189 | 1,430 | 1,126,560 |
| 2015 | 0 | 15,716 | 22,604 | 1,295,799 | 1,430 | 1,335,549 | 0 | 12,246 | 22,604 | 1,211,319 | 1,430 | 1,247,599 |
| 2016 | 0 | 15,479 | (21,084) | 1,295,799 | 1,430 | 1,291,624 | 0 | 12,009 | (21,084) | 1,211,319 | 1,430 | 1,203,674 |
| 2017 | 0 | 15,545 | 33,266 | 1,295,799 | 1,430 | 1,346,040 | 0 | 12,075 | 33,266 | 1,211,319 | 1,430 | 1,258,090 |
| 2018 | 0 | 15,648 | (50,078) | 1,295,799 | 1,430 | 1,262,799 | 0 | 12,178 | (50,078) | 1,211,319 | 1,430 | 1,174,849 |
| 2019 | 0 | 15,574 | 31,508 | 1,295,799 | 1,430 | 1,344,311 | 0 | 12,104 | 31,508 | 1,211,319 | 1,430 | 1,256,361 |
| 2020 | 0 | 15,597 | (3,398) | 1,299,799 | 1,430 | 1,313,428 | 0 | 12,127 | (3,398) | 1,214,617 | 1,430 | 1,224,776 |
| 2021 | 0 | 15,596 | (1,117) | 1,299,799 | 1,430 | 1,315,708 | 0 | 12,126 | (1,117) | 1,214,617 | 1,430 | 1,227,056 |
| 2022 | 0 | 15,590 | (3,434) | 1,299,799 | 1,430 | 1,313,385 | 0 | 12,120 | (3,434) | 1,214,617 | 1,430 | 1,224,733 |
| 2023 | 0 | 15,589 | (18,638) | 1,299,799 | 1,430 | 1,298,180 | 0 | 12,119 | (18,638) | 1,214,617 | 1,430 | 1,209,528 |
| 2024 | 0 | 15,531 | 21,309 | 1,299,799 | 1,430 | 1,338,069 | 0 | 12,061 | 21,309 | 1,214,617 | 1,430 | 1,249,417 |
| 2025 | 0 | 15,615 | (11,624) | 1,299,799 | 1,430 | 1,305,220 | 0 | 12,145 | (11,624) | 1,214,617 | 1,430 | 1,216,568 |
| 2026 | 0 | 15,580 | 13,030 | 1,299,799 | 1,430 | 1,329,839 | 0 | 12,110 | 13,030 | 1,214,617 | 1,430 | 1,241,187 |
| 2027 | 0 | 15,511 | (6,161) | 1,299,799 | 1,430 | 1,310,579 | 0 | 12,041 | (6,161) | 1,214,617 | 1,430 | 1,221,927 |
| 2028 | 0 | 15,611 | 4,006 | 1,299,799 | 1,430 | 1,320,846 | 0 | 12,141 | 4,006 | 1,214,617 | 1,430 | 1,232,194 |
| 2029 | 0 | 15,605 | (913) | 1,299,799 | 1,430 | 1,315,921 | 0 | 12,135 | (913) | 1,214,617 | 1,430 | 1,227,269 |
| 2030 | 0 | 15,580 | 8,528 | 1,299,799 | 1,430 | 1,325,337 | 0 | 12,110 | 8,528 | 1,214,617 | 1,430 | 1,236,685 |
| 2031 | 0 | 15,606 | (31,057) | 1,299,799 | 1,430 | 1,285,778 | 0 | 12,136 | (31,057) | 1,214,617 | 1,430 | 1,197,126 |
| 2032 | 0 | 15,515 | 43,953 | 1,299,799 | 1,430 | 1,360,697 | 0 | 12,045 | 43,953 | 1,214,617 | 1,430 | 1,272,045 |
| 2033 | 0 | 15,504 | (37,929) | 1,299,799 | 1,430 | 1,278,804 | 0 | 12,034 | (37,929) | 1,214,617 | 1,430 | 1,190,152 |
| 2034 | 0 | 15,419 | 28,588 | 1,299,799 | 1,430 | 1,345,236 | 0 | 11,949 | 28,588 | 1,214,617 | 1,430 | 1,256,584 |
| 2035 | 0 | 15,542 | (49,219) | 1,299,799 | 1,430 | 1,267,552 | 0 | 12,072 | (49,219) | 1,214,617 | 1,430 | 1,178,900 |

TABLE B-6. Annual Water Quantities Conveyed through Each Pumping and Power Recovery Plant of Project Transportation Facilities

(in acre-feet)

Sheet 7 of 10

| Calendar Year | CALIFORNIA AQUEDUCT (continued) | | | | | | | | | |
|----------------------|---------------------------------|----------------------------|---------------------------------|------------|-------|-----------|--------------------------|----------------------------|-----------------------------|--------|
| | Santa Ana Division | | | | | | | | | |
| | Devil Canyon Powerplant | | | | | | Greenspot Pumping Plant | | | |
| | Initial Fill Water | Opera- tional Losses | Reservoir Storage Changes | Deliveries | | Total | Initial Fill Water | Opera- tional Losses | Water Supply Delivery | Total |
| | [75] | [76] | [77] | [78] | [79] | [80] | [81] | [82] | [83] | [84] |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1968 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1969 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1970 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1972 | 37 | 0 | 0 | 1,275 | 0 | 1,312 | 0 | 0 | 0 | 0 |
| 1973 | 40,848 | 14,745 | 0 | 51,812 | 0 | 107,405 | 0 | 0 | 0 | 0 |
| 1974 | 74,666 | 8,367 | (4,925) | 102,198 | 0 | 180,306 | 0 | 0 | 0 | 0 |
| 1975 | 10,000 | 1,995 | (6,719) | 189,526 | 0 | 194,802 | 0 | 0 | 0 | 0 |
| 1976 | 4,168 | 5,180 | (9,182) | 235,711 | 23 | 235,900 | 0 | 0 | 0 | 0 |
| 1977 | 0 | 8,082 | (5,235) | 101,137 | 469 | 104,453 | 0 | 0 | 0 | 0 |
| 1978 | 14,820 | 3,754 | 21,686 | 373,636 | 481 | 414,377 | 0 | 0 | 0 | 0 |
| 1979 | 12,302 | 5,620 | (27,107) | 356,854 | 485 | 348,154 | 0 | 0 | 0 | 0 |
| 1980 | 0 | 9,468 | 12,714 | 395,975 | 742 | 418,899 | 0 | 0 | 0 | 0 |
| 1981 | 0 | 8,401 | (23,448) | 569,088 | 807 | 554,848 | 0 | 0 | 0 | 0 |
| 1982 | 0 | 6,012 | 44,469 | 399,799 | 1,798 | 452,078 | 0 | 0 | 0 | 0 |
| 1983 | 0 | 8,597 | 5,188 | 230,277 | 1,078 | 245,140 | 0 | 0 | 0 | 0 |
| 1984 | 0 | 12,861 | (850) | 250,938 | 1,414 | 264,363 | 0 | 0 | 0 | 0 |
| 1985 | 0 | 14,325 | (8,791) | 349,336 | 956 | 355,826 | 0 | 0 | 0 | 0 |
| 1986 | 0 | 9,486 | 8,339 | 392,650 | 1,378 | 411,853 | 0 | 0 | 0 | 0 |
| 1987 | 0 | 7,923 | (11,335) | 375,451 | 1,118 | 373,157 | 0 | 0 | 0 | 0 |
| 1988 | 0 | 11,090 | 2,238 | 499,285 | 861 | 513,474 | 0 | 0 | 0 | 0 |
| 1989 | 0 | 13,116 | (5,487) | 658,730 | 1,301 | 667,660 | 0 | 0 | 0 | 0 |
| 1990 | 0 | 13,439 | (4,622) | 728,723 | 1,281 | 738,821 | 0 | 0 | 0 | 0 |
| 1991 | 0 | 10,836 | 18,308 | 161,032 | 340 | 190,516 | 0 | 0 | 0 | 0 |
| 1992 | 0 | 9,157 | (9,084) | 328,354 | 371 | 328,798 | 0 | 0 | 0 | 0 |
| 1993 | 0 | 5,602 | 5,593 | 244,678 | 364 | 256,237 | 0 | 0 | 0 | 0 |
| 1994 | 0 | 10,915 | (11,045) | 393,690 | 357 | 393,917 | 0 | 0 | 0 | 0 |
| 1995 | 0 | 11,268 | 2,331 | 320,978 | 358 | 334,935 | 0 | 0 | 0 | 0 |
| 1996 | 0 | 9,496 | 13,015 | 417,656 | 494 | 440,661 | 0 | 0 | 0 | 0 |
| 1997 | 0 | 8,087 | (19,685) | 451,874 | 416 | 440,692 | 0 | 0 | 0 | 0 |
| 1998 | 0 | 6,700 | 16,643 | 332,198 | 310 | 355,851 | 0 | 0 | 0 | 0 |
| 1999 | 0 | 9,784 | (4,177) | 497,787 | 341 | 503,735 | 0 | 0 | 0 | 0 |
| 2000 | 0 | 7,407 | (11,040) | 853,786 | 375 | 850,528 | 0 | 0 | 0 | 0 |
| 2001 | 0 | 9,324 | 8,183 | 631,363 | 374 | 649,244 | 0 | 0 | 0 | 0 |
| 2002 | 0 | 10,315 | 9,682 | 818,028 | 413 | 838,438 | 0 | 0 | 0 | 0 |
| 2003 | 0 | 9,198 | (18,298) | 922,901 | 260 | 914,061 | 0 | 0 | 4,526 | 4,526 |
| 2004 | 0 | 11,166 | 15,150 | 1,033,309 | 85 | 1,059,710 | 0 | 0 | 3,798 | 3,798 |
| 2005 | 0 | 4,500 | (63,441) | 1,010,247 | 0 | 951,306 | 0 | 0 | 3,686 | 3,686 |
| 2006 | 0 | 8,208 | 7,571 | 1,153,993 | 0 | 1,169,772 | 0 | 0 | 7,775 | 7,775 |
| 2007 | 0 | 8,216 | (5,872) | 953,803 | 0 | 956,147 | 0 | 0 | 12,168 | 12,168 |
| 2008 | 0 | 10,599 | 7,759 | 533,221 | 0 | 551,579 | 0 | 0 | 14,408 | 14,408 |
| 2009 | 0 | 10,035 | (5,600) | 410,032 | 1,025 | 415,492 | 0 | 0 | 20,542 | 20,542 |
| 2010 | 0 | 7,717 | (1,664) | 348,039 | 1,250 | 355,342 | 0 | 0 | 7,017 | 7,017 |
| 2011 | 0 | 7,761 | (1,038) | 1,087,069 | 1,250 | 1,095,042 | 0 | 0 | 9,300 | 9,300 |
| 2012 | 0 | 7,807 | (142) | 1,083,569 | 1,250 | 1,092,484 | 0 | 0 | 9,800 | 9,800 |
| 2013 | 0 | 8,499 | 16,733 | 1,085,569 | 1,250 | 1,112,051 | 0 | 0 | 11,800 | 11,800 |
| 2014 | 0 | 8,522 | (4,585) | 1,105,869 | 1,250 | 1,111,056 | 0 | 0 | 15,300 | 15,300 |
| 2015 | 0 | 8,499 | 2,964 | 1,204,919 | 1,250 | 1,217,632 | 0 | 0 | 17,300 | 17,300 |
| 2016 | 0 | 8,483 | (1,269) | 1,205,519 | 1,250 | 1,213,983 | 0 | 0 | 17,300 | 17,300 |
| 2017 | 0 | 8,502 | 9,828 | 1,205,519 | 1,250 | 1,225,099 | 0 | 0 | 17,300 | 17,300 |
| 2018 | 0 | 8,484 | (19,777) | 1,205,519 | 1,250 | 1,195,476 | 0 | 0 | 17,300 | 17,300 |
| 2019 | 0 | 8,492 | 17,408 | 1,205,519 | 1,250 | 1,232,669 | 0 | 0 | 17,300 | 17,300 |
| 2020 | 0 | 8,483 | (17,305) | 1,205,519 | 1,250 | 1,197,947 | 0 | 0 | 17,300 | 17,300 |
| 2021 | 0 | 8,486 | (398) | 1,205,519 | 1,250 | 1,214,857 | 0 | 0 | 17,300 | 17,300 |
| 2022 | 0 | 8,486 | 13,735 | 1,205,519 | 1,250 | 1,228,990 | 0 | 0 | 17,300 | 17,300 |
| 2023 | 0 | 8,482 | (8,417) | 1,205,519 | 1,250 | 1,206,834 | 0 | 0 | 17,300 | 17,300 |
| 2024 | 0 | 8,462 | 689 | 1,205,519 | 1,250 | 1,215,920 | 0 | 0 | 17,300 | 17,300 |
| 2025 | 0 | 8,489 | 4,591 | 1,205,519 | 1,250 | 1,219,849 | 0 | 0 | 17,300 | 17,300 |
| 2026 | 0 | 8,475 | (3,819) | 1,205,519 | 1,250 | 1,211,425 | 0 | 0 | 17,300 | 17,300 |
| 2027 | 0 | 8,479 | 745 | 1,205,519 | 1,250 | 1,215,993 | 0 | 0 | 17,300 | 17,300 |
| 2028 | 0 | 8,481 | (5,355) | 1,205,519 | 1,250 | 1,209,895 | 0 | 0 | 17,300 | 17,300 |
| 2029 | 0 | 8,481 | 2,909 | 1,205,519 | 1,250 | 1,218,159 | 0 | 0 | 17,300 | 17,300 |
| 2030 | 0 | 8,480 | 296 | 1,205,519 | 1,250 | 1,215,545 | 0 | 0 | 17,300 | 17,300 |
| 2031 | 0 | 8,475 | (1,976) | 1,205,519 | 1,250 | 1,213,268 | 0 | 0 | 17,300 | 17,300 |
| 2032 | 0 | 8,449 | 18,821 | 1,205,519 | 1,250 | 1,234,039 | 0 | 0 | 17,300 | 17,300 |
| 2033 | 0 | 8,449 | (23,419) | 1,205,519 | 1,250 | 1,191,799 | 0 | 0 | 17,300 | 17,300 |
| 2034 | 0 | 8,443 | 21,651 | 1,205,519 | 1,250 | 1,236,863 | 0 | 0 | 17,300 | 17,300 |
| 2035 | 0 | 8,451 | (31,434) | 1,205,519 | 1,250 | 1,183,786 | 0 | 0 | 17,300 | 17,300 |

TABLE B-6. Annual Water Quantities Conveyed through Each Pumping and Power Recovery Plant of Project Transportation Facilities

(in acre-feet)

Sheet 8 of 10

| Calendar Year | CALIFORNIA AQUEDUCT (contiued) | | | | | | | | | | | | | | |
|----------------------|--------------------------------|----------------------------|-----------------------------|--------|-----------------------------|----------------------------|-----------------------------|-------|----------------------------------|----------------------------|---------------------------------|-----------------|--------|-----------|--|
| | Santa Ana Division (continued) | | | | | | | | West Branch, California Aqueduct | | | | | | |
| | Crafter Hills Pumping Plant | | | | Cherry Valley Pumping Plant | | | | Oso Pumping Plant | | | | | | |
| | Initial Fill Water | Opera- tional Losses | Water Supply Delivery | Total | Initial Fill Water | Opera- tional Losses | Water Supply Delivery | Total | Initial Fill Water | Opera- tional Losses | Reservoir Storage Changes | Deliveries | | Total | |
| | | | | | | | | | | | Water Supply | Recrea- tion | | | |
| | [85] | [86] | [87] | [88] | [89] | [90] | [91] | [92] | [93] | [94] | [95] | [96] | [97] | [98] | |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 1968 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 1969 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 1970 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 1971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,444 | 133 | 0 | 0 | 0 | 2,577 | |
| 1972 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 63,883 | 6,557 | (6,405) | 71,991 | 6,481 | 142,507 | |
| 1973 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 124,461 | 16,995 | 4,029 | 155,317 | 1,075 | 301,877 | |
| 1974 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 160,860 | 12,702 | (4,146) | 209,172 | 2,064 | 380,652 | |
| 1975 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 93,352 | 23,008 | 7,704 | 374,306 | 3,288 | 501,658 | |
| 1976 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 56,954 | 15,845 | (136,116) | 420,708 | 1,429 | 358,820 | |
| 1977 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4,407 | (98,685) | 122,447 | (20) | 28,149 | |
| 1978 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 45,105 | 9,061 | 52,774 | 171,139 | 176 | 278,255 | |
| 1979 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25,355 | (18,781) | 145,598 | 0 | 152,172 | |
| 1980 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24,576 | (140,168) | 165,931 | 481 | 50,820 | |
| 1981 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15,254 | 59,637 | 283,264 | 3,179 | 361,334 | |
| 1982 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23,824 | 61,685 | 360,878 | 2,126 | 448,513 | |
| 1983 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23,601 | (74,308) | 166,995 | 6,111 | 122,399 | |
| 1984 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12,461 | (138,146) | 272,101 | 3,750 | 150,166 | |
| 1985 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 28,257 | 142,219 | 403,097 | 3,728 | 577,301 | |
| 1986 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22,387 | 25,288 | 393,203 | 1,777 | 442,655 | |
| 1987 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18,164 | (10,252) | 433,452 | 5,698 | 447,062 | |
| 1988 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20,461 | (30,848) | 507,169 | 3,389 | 500,171 | |
| 1989 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27,914 | (40,463) | 611,681 | 6,083 | 605,215 | |
| 1990 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 33,666 | (9,176) | 791,355 | 7,491 | 823,336 | |
| 1991 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16,460 | 70,754 | 263,909 | 4,166 | 355,289 | |
| 1992 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8,238 | (75,008) | 435,661 | 1,572 | 370,463 | |
| 1993 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,674 | (124,283) | 451,263 | 1,233 | 330,887 | |
| 1994 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18,688 | (91,606) | 490,819 | 2,488 | 420,389 | |
| 1995 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21,775 | 14,330 | 157,629 | 1,242 | 194,976 | |
| 1996 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30,121 | 26,848 | 286,066 | 2,363 | 345,398 | |
| 1997 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30,468 | 1,892 | 323,212 | 1,569 | 357,141 | |
| 1998 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26,851 | (122,848) | 208,916 | 1,222 | 114,141 | |
| 1999 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25,690 | 5,679 | 357,664 | 2,883 | 391,916 | |
| 2000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 33,658 | 18,198 | 668,126 | 3,767 | 723,749 | |
| 2001 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24,551 | (22,308) | 477,315 | 759 | 480,317 | |
| 2002 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 44,692 | 41,944 | 779,284 | 3,471 | 869,391 | |
| 2003 | 0 | 0 | 2,733 | 2,733 | 0 | 0 | 116 | 116 | 0 | 39,495 | (27,394) | 735,699 | 10,290 | 758,090 | |
| 2004 | 0 | 0 | 3,212 | 3,212 | 0 | 0 | 841 | 841 | 0 | 41,947 | (14,046) | 850,007 | 478 | 878,386 | |
| 2005 | 0 | 0 | 2,727 | 2,727 | 0 | 0 | 692 | 692 | 0 | 38,154 | (109,664) | 577,251 | 475 | 506,216 | |
| 2006 | 0 | 0 | 6,892 | 6,892 | 0 | 0 | 807 | 807 | 0 | 38,534 | (128,775) | 616,546 | 406 | 526,711 | |
| 2007 | 0 | 0 | 9,038 | 9,038 | 0 | 0 | 177 | 177 | 0 | 46,921 | 123,287 | 760,750 | 202 | 931,160 | |
| 2008 | 0 | 0 | 13,728 | 13,728 | 0 | 0 | 1,042 | 1,042 | 0 | 36,204 | (9,613) | 531,832 | 247 | 558,670 | |
| 2009 | 0 | 0 | 16,463 | 16,463 | 0 | 0 | 1,898 | 1,898 | 0 | 33,295 | 4,893 | 631,969 | 195 | 670,352 | |
| 2010 | 0 | 0 | 7,017 | 7,017 | 0 | 0 | 1 | 1 | 0 | 17,307 | 19,910 | 467,791 | 5,380 | 510,388 | |
| 2011 | 0 | 0 | 9,300 | 9,300 | 0 | 0 | 0 | 0 | 0 | 17,338 | 2,073 | 868,862 | 5,380 | 893,653 | |
| 2012 | 0 | 0 | 9,800 | 9,800 | 0 | 0 | 0 | 0 | 0 | 17,338 | 2,072 | 869,462 | 5,380 | 894,252 | |
| 2013 | 0 | 0 | 11,800 | 11,800 | 0 | 0 | 0 | 0 | 0 | 14,440 | 5,007 | 870,062 | 5,380 | 894,889 | |
| 2014 | 0 | 0 | 15,300 | 15,300 | 0 | 0 | 0 | 0 | 0 | 14,581 | 13,866 | 874,062 | 5,380 | 907,889 | |
| 2015 | 0 | 0 | 17,300 | 17,300 | 0 | 0 | 0 | 0 | 0 | 14,646 | 9,399 | 1,134,262 | 5,380 | 1,163,687 | |
| 2016 | 0 | 0 | 17,300 | 17,300 | 0 | 0 | 0 | 0 | 0 | 14,583 | (7,317) | 1,134,262 | 5,380 | 1,146,908 | |
| 2017 | 0 | 0 | 17,300 | 17,300 | 0 | 0 | 0 | 0 | 0 | 14,749 | 28,043 | 1,134,262 | 5,380 | 1,182,434 | |
| 2018 | 0 | 0 | 17,300 | 17,300 | 0 | 0 | 0 | 0 | 0 | 14,800 | (30,739) | 1,134,262 | 5,380 | 1,123,703 | |
| 2019 | 0 | 0 | 17,300 | 17,300 | 0 | 0 | 0 | 0 | 0 | 14,698 | 18,671 | 1,134,262 | 5,380 | 1,173,011 | |
| 2020 | 0 | 0 | 17,300 | 17,300 | 0 | 0 | 0 | 0 | 0 | 14,739 | 3,032 | 1,134,262 | 5,380 | 1,157,413 | |
| 2021 | 0 | 0 | 17,300 | 17,300 | 0 | 0 | 0 | 0 | 0 | 14,823 | 11,842 | 1,134,262 | 5,380 | 1,166,307 | |
| 2022 | 0 | 0 | 17,300 | 17,300 | 0 | 0 | 0 | 0 | 0 | 14,823 | (49) | 1,134,262 | 5,380 | 1,154,416 | |
| 2023 | 0 | 0 | 17,300 | 17,300 | 0 | 0 | 0 | 0 | 0 | 14,815 | (333) | 1,134,262 | 5,380 | 1,154,124 | |
| 2024 | 0 | 0 | 17,300 | 17,300 | 0 | 0 | 0 | 0 | 0 | 14,752 | (10,020) | 1,134,262 | 5,380 | 1,144,374 | |
| 2025 | 0 | 0 | 17,300 | 17,300 | 0 | 0 | 0 | 0 | 0 | 14,731 | (894) | 1,134,262 | 5,380 | 1,153,479 | |
| 2026 | 0 | 0 | 17,300 | 17,300 | 0 | 0 | 0 | 0 | 0 | 14,778 | 11,278 | 1,134,262 | 5,380 | 1,165,698 | |
| 2027 | 0 | 0 | 17,300 | 17,300 | 0 | 0 | 0 | 0 | 0 | 14,760 | (11,638) | 1,134,262 | 5,380 | 1,142,764 | |
| 2028 | 0 | 0 | 17,300 | 17,300 | 0 | 0 | 0 | 0 | 0 | 14,800 | 8,285 | 1,134,262 | 5,380 | 1,162,727 | |
| 2029 | 0 | 0 | 17,300 | 17,300 | 0 | 0 | 0 | 0 | 0 | 14,733 | (8,133) | 1,134,262 | 5,380 | 1,146,242 | |
| 2030 | 0 | 0 | 17,300 | 17,300 | 0 | 0 | 0 | 0 | 0 | 14,822 | 12,228 | 1,134,262 | 5,380 | 1,166,692 | |
| 2031 | 0 | 0 | 17,300 | 17,300 | 0 | 0 | 0 | 0 | 0 | 14,668 | (66,669) | 1,134,262 | 5,380 | 1,087,641 | |
| 2032 | 0 | 0 | 17,300 | 17,300 | 0 | 0 | 0 | 0 | 0 | 14,361 | 41,046 | 1,134,262 | 5,380 | 1,195,049 | |
| 2033 | 0 | 0 | 17,300 | 17,300 | 0 | 0 | 0 | 0 | 0 | 14,577 | (56,723) | 1,134,262 | 5,380 | 1,097,496 | |
| 2034 | 0 | 0 | 17,300 | 17,300 | 0 | 0 | 0 | 0 | 0 | 14,154 | 41,005 | 1,134,262 | 5,380 | 1,194,801 | |
| 2035 | 0 | 0 | 17,300 | 17,300 | 0 | 0 | 0 | 0 | 0 | 13,371 | (193,440) | 1,134,262 | 5,380 | 959,573 | |

TABLE B-6. Annual Water Quantities Conveyed through Each Pumping and Power Recovery Plant of Project Transportation Facilities

(in acre-feet)

Sheet 9 of 10

| Calendar Year | CALIFORNIA AQUEDUCT (continued) | | | | | | | | | | | |
|----------------------|--|----------------------------|---------------------------------|-----------------|--------|-----------|--------------------------|----------------------------|---------------------------------|-----------------|-----------------|-----------|
| | West Branch, California Aqueduct (continued) | | | | | | | | | | | |
| | Warne Powerplant | | | | | | Castaic Powerplant | | | | | |
| | Initial Fill Water | Opera- tional Losses | Reservoir Storage Changes | Deliveries | | Total | Initial Fill Water | Opera- tional Losses | Reservoir Storage Changes | Deliveries | | Total |
| | | | Water Supply | Recrea- tion | | | | | | Water Supply | Recrea- tion | |
| | [99] | [100] | [101] | [102] | [103] | [104] | [105] | [106] | [107] | [108] | [109] | [110] |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1968 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1969 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1970 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1972 | 0 | 0 | 0 | 0 | 0 | 0 | 57.364 | 1.788 | (6.162) | 71.938 | 6.481 | 131.409 |
| 1973 | 0 | 0 | 0 | 0 | 0 | 0 | 37,198 | 6,430 | 4,542 | 155,297 | 1,075 | 204,542 |
| 1974 | 0 | 0 | 0 | 0 | 0 | 0 | 82,364 | 1,772 | (950) | 209,136 | 541 | 292,863 |
| 1975 | 0 | 0 | 0 | 0 | 0 | 0 | 90,460 | 5,002 | (1,534) | 374,280 | 1,563 | 469,771 |
| 1976 | 0 | 0 | 0 | 0 | 0 | 0 | 55,990 | (7,695) | (132,036) | 420,684 | 1,429 | 338,372 |
| 1977 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | (1,485) | (102,532) | 122,447 | (20) | 18,410 |
| 1978 | 0 | 0 | 0 | 0 | 0 | 0 | 45,105 | (2,264) | 129,523 | 171,139 | 176 | 343,679 |
| 1979 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | (2,339) | (20,400) | 145,598 | 0 | 122,859 |
| 1980 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 991 | (118,026) | 165,931 | 481 | 49,377 |
| 1981 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | (44,416) | 47,244 | 283,264 | 2,704 | 288,796 |
| 1982 | 0 | 24.468 | 61.169 | 360.878 | 2.126 | 448,641 | 0 | (60,135) | 59,069 | 360,878 | 1,187 | 360,999 |
| 1983 | 0 | 20.780 | (74.308) | 166,995 | 6.111 | 119,578 | 0 | (33,418) | (46,904) | 166,995 | 2,618 | 89,291 |
| 1984 | 0 | 13,572 | (139,219) | 275,212 | 2,208 | 151,773 | 0 | (29,618) | (139,545) | 275,212 | 2,201 | 108,250 |
| 1985 | 0 | 29,286 | 141,492 | 403,097 | 874 | 574,749 | 0 | (4,622) | 135,007 | 403,097 | 844 | 534,326 |
| 1986 | 0 | 21,579 | 25,288 | 393,203 | 1,777 | 441,847 | 0 | (6,664) | 21,520 | 393,203 | 623 | 408,682 |
| 1987 | 0 | 20,885 | (10,252) | 433,452 | 5,698 | 449,783 | 0 | (5,19) | (6,241) | 433,452 | 2,734 | 429,426 |
| 1988 | 0 | 23,253 | (31,453) | 507,169 | 3,389 | 502,358 | 0 | 12,650 | (28,498) | 507,169 | 1,359 | 492,680 |
| 1989 | 0 | 27,131 | (40,463) | 611,681 | 6,083 | 604,432 | 0 | 634 | (40,154) | 611,681 | 3,161 | 575,322 |
| 1990 | 0 | 34,208 | (9,176) | 791,355 | 7,491 | 823,878 | 0 | (14,012) | (15,101) | 786,519 | 3,419 | 760,825 |
| 1991 | 0 | 16,908 | 70,754 | 263,909 | 4,166 | 355,737 | 0 | (871) | 89,637 | 262,921 | 2,283 | 353,970 |
| 1992 | 0 | 9,638 | (75,008) | 435,661 | 1,572 | 371,863 | 0 | (609) | (71,795) | 435,661 | 1,543 | 364,800 |
| 1993 | 0 | 1,922 | (124,283) | 451,257 | 1,233 | 330,129 | 0 | 21,959 | (77,428) | 451,257 | 1,211 | 396,999 |
| 1994 | 0 | 23,151 | (91,606) | 490,819 | 2,488 | 424,852 | 0 | 5,205 | (95,738) | 490,819 | 2,465 | 402,751 |
| 1995 | 0 | 15,860 | 14,330 | 157,629 | 1,242 | 189,061 | 0 | 20,400 | 75,863 | 157,629 | 1,223 | 255,115 |
| 1996 | 0 | 21,191 | 26,848 | 286,066 | 2,363 | 336,468 | 0 | (5,621) | 19,088 | 286,066 | 2,362 | 301,895 |
| 1997 | 0 | 23,437 | 1,892 | 323,201 | 1,569 | 350,099 | 0 | 11,119 | (1,802) | 323,201 | 1,566 | 334,084 |
| 1998 | 0 | 26,864 | (122,848) | 208,909 | 1,222 | 114,147 | 0 | 24,544 | (57,726) | 208,909 | 1,222 | 176,949 |
| 1999 | 0 | 21,822 | 8,120 | 357,664 | 2,883 | 390,489 | 0 | (3,670) | 6,280 | 357,664 | 2,865 | 363,139 |
| 2000 | 0 | 27,237 | 18,198 | 668,126 | 3,767 | 717,328 | 0 | (19,645) | 9,320 | 665,926 | 1,556 | 657,157 |
| 2001 | 0 | 17,404 | (22,308) | 477,315 | 759 | 473,170 | 0 | (5,949) | (16,588) | 477,315 | 746 | 455,524 |
| 2002 | 0 | 35,058 | 41,944 | 779,284 | 3,471 | 859,757 | 0 | 10,071 | 35,623 | 776,136 | 305 | 822,135 |
| 2003 | 0 | 28,167 | (27,394) | 735,699 | 10,290 | 746,762 | 0 | 9,075 | (17,034) | 725,781 | 356 | 718,178 |
| 2004 | 0 | 31,034 | (14,046) | 850,007 | 478 | 867,473 | 0 | 9,120 | (11,440) | 845,960 | 456 | 844,096 |
| 2005 | 0 | 29,111 | (109,664) | 577,251 | 475 | 497,173 | 0 | 21,155 | (61,490) | 577,251 | 472 | 537,388 |
| 2006 | 0 | 23,453 | (128,775) | 616,546 | 406 | 511,630 | 0 | 4,173 | (121,607) | 616,546 | 396 | 499,508 |
| 2007 | 0 | 29,978 | 123,287 | 760,750 | 202 | 914,217 | 0 | (1,664) | 117,880 | 758,860 | 196 | 875,272 |
| 2008 | 0 | 36,744 | (9,613) | 531,832 | 247 | 559,210 | 0 | 498 | (14,279) | 529,852 | 211 | 516,282 |
| 2009 | 0 | 30,564 | 4,893 | 631,969 | 195 | 667,621 | 0 | (2,825) | 9,194 | 628,819 | 164 | 635,352 |
| 2010 | 0 | 15,397 | 19,910 | 467,791 | 5,380 | 508,478 | 0 | 9,663 | 21,680 | 466,685 | 2,330 | 500,358 |
| 2011 | 0 | 15,428 | 2,073 | 868,862 | 5,380 | 891,743 | 0 | 9,696 | 73 | 865,712 | 2,330 | 877,811 |
| 2012 | 0 | 15,428 | 2,072 | 869,462 | 5,380 | 892,342 | 0 | 9,696 | 72 | 866,312 | 2,330 | 878,410 |
| 2013 | 0 | 12,530 | 5,007 | 870,062 | 5,380 | 892,979 | 0 | 6,245 | 5,007 | 866,912 | 2,330 | 880,494 |
| 2014 | 0 | 12,671 | 13,866 | 874,062 | 5,380 | 905,979 | 0 | 6,386 | 13,866 | 870,912 | 2,330 | 893,494 |
| 2015 | 0 | 12,736 | 9,399 | 1,134,262 | 5,380 | 1,161,777 | 0 | 6,451 | 9,399 | 1,131,112 | 2,330 | 1,149,292 |
| 2016 | 0 | 12,673 | (7,317) | 1,134,262 | 5,380 | 1,144,998 | 0 | 6,388 | (7,317) | 1,131,112 | 2,330 | 1,132,513 |
| 2017 | 0 | 12,839 | 28,043 | 1,134,262 | 5,380 | 1,180,524 | 0 | 6,554 | 28,043 | 1,131,112 | 2,330 | 1,168,039 |
| 2018 | 0 | 12,890 | (30,739) | 1,134,262 | 5,380 | 1,121,793 | 0 | 6,605 | (30,739) | 1,131,112 | 2,330 | 1,109,308 |
| 2019 | 0 | 12,788 | 18,671 | 1,134,262 | 5,380 | 1,171,101 | 0 | 6,503 | 18,671 | 1,131,112 | 2,330 | 1,158,616 |
| 2020 | 0 | 12,829 | 3,032 | 1,134,262 | 5,380 | 1,155,503 | 0 | 6,544 | 3,032 | 1,131,112 | 2,330 | 1,143,018 |
| 2021 | 0 | 12,913 | 11,842 | 1,134,262 | 5,380 | 1,164,397 | 0 | 6,628 | 11,842 | 1,131,112 | 2,330 | 1,151,912 |
| 2022 | 0 | 12,913 | (49) | 1,134,262 | 5,380 | 1,152,506 | 0 | 6,628 | (49) | 1,131,112 | 2,330 | 1,140,021 |
| 2023 | 0 | 12,905 | (333) | 1,134,262 | 5,380 | 1,152,214 | 0 | 6,620 | (333) | 1,131,112 | 2,330 | 1,139,729 |
| 2024 | 0 | 12,842 | (10,020) | 1,134,262 | 5,380 | 1,142,464 | 0 | 6,557 | (10,020) | 1,131,112 | 2,330 | 1,129,979 |
| 2025 | 0 | 12,821 | (894) | 1,134,262 | 5,380 | 1,151,569 | 0 | 6,536 | (894) | 1,131,112 | 2,330 | 1,139,084 |
| 2026 | 0 | 12,868 | 11,278 | 1,134,262 | 5,380 | 1,163,788 | 0 | 6,583 | 11,278 | 1,131,112 | 2,330 | 1,151,303 |
| 2027 | 0 | 12,850 | (11,638) | 1,134,262 | 5,380 | 1,140,854 | 0 | 6,565 | (11,638) | 1,131,112 | 2,330 | 1,128,369 |
| 2028 | 0 | 12,890 | 8,285 | 1,134,262 | 5,380 | 1,160,817 | 0 | 6,605 | 8,285 | 1,131,112 | 2,330 | 1,148,332 |
| 2029 | 0 | 12,823 | (8,133) | 1,134,262 | 5,380 | 1,144,332 | 0 | 6,538 | (8,133) | 1,131,112 | 2,330 | 1,131,847 |
| 2030 | 0 | 12,912 | 12,228 | 1,134,262 | 5,380 | 1,164,782 | 0 | 6,627 | 12,228 | 1,131,112 | 2,330 | 1,152,297 |
| 2031 | 0 | 12,758 | (66,669) | 1,134,262 | 5,380 | 1,085,731 | 0 | 6,473 | (66,669) | 1,131,112 | 2,330 | 1,073,246 |
| 2032 | 0 | 12,451 | 41,046 | 1,134,262 | 5,380 | 1,193,139 | 0 | 6,166 | 41,046 | 1,131,112 | 2,330 | 1,180,654 |
| 2033 | 0 | 12,667 | (56,723) | 1,134,262 | 5,380 | 1,095,586 | 0 | 6,382 | (56,723) | 1,131,112 | 2,330 | 1,083,101 |
| 2034 | 0 | 12,244 | 41,005 | 1,134,262 | 5,380 | 1,192,891 | 0 | 5,959 | 41,005 | 1,131,112 | 2,330 | 1,180,406 |
| 2035 | 0 | 11,461 | (193,440) | 1,134,262 | 5,380 | 957,663 | 0 | 5,176 | (193,440) | 1,131,112 | 2,330 | 945,178 |

TABLE B-6. Annual Water Quantities Conveyed through Each Pumping and Power Recovery Plant of Project Transportation Facilities

| Calendar Year | (in acre-feet) | | | | | | | | Sheet 10 of 10 | |
|---------------|---|--------------------|-----------------------|---------|---|--------------------|-----------------------|--------|----------------|--|
| | CALIFORNIA AQUEDUCT (continued) | | | | | | | | | |
| | Coastal Branch, California Aqueduct | | | | | | | | | |
| | Las Perillas and Badger Hill Pumping Plants | | | | Devil's Den, Bluestone, and Polonio Pass Pumping Plants | | | | | |
| | Initial Fill Water | Operational Losses | Water Supply Delivery | Total | Initial Fill Water | Operational Losses | Water Supply Delivery | Total | | |
| | [111] | [112] | [113] | [114] | [115] | [116] | [117] | [118] | | |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 1968 | 210 | 873 | 79,039 | 80,122 | 210 | 0 | 0 | 210 | | |
| 1969 | 0 | 1,042 | 62,064 | 63,106 | 0 | 0 | 0 | 0 | | |
| 1970 | 0 | 638 | 83,649 | 84,287 | 0 | 0 | 0 | 0 | | |
| 1971 | 0 | 3,455 | 110,971 | 114,426 | 0 | 0 | 0 | 0 | | |
| 1972 | 0 | 1,745 | 121,755 | 123,500 | 0 | 0 | 0 | 0 | | |
| 1973 | 0 | 5,479 | 78,645 | 84,124 | 0 | 0 | 0 | 0 | | |
| 1974 | 0 | 7,344 | 78,174 | 85,518 | 0 | 0 | 0 | 0 | | |
| 1975 | 0 | 5,819 | 85,216 | 91,035 | 0 | 0 | 0 | 0 | | |
| 1976 | 0 | 6,562 | 90,058 | 96,620 | 0 | 0 | 0 | 0 | | |
| 1977 | 0 | 5,777 | 40,579 | 46,356 | 0 | 0 | 0 | 0 | | |
| 1978 | 0 | 9,085 | 92,604 | 101,689 | 0 | 0 | 0 | 0 | | |
| 1979 | 0 | 10,896 | 123,155 | 134,051 | 0 | 0 | 0 | 0 | | |
| 1980 | 0 | 9,449 | 111,379 | 120,828 | 0 | 0 | 0 | 0 | | |
| 1981 | 0 | 13,232 | 109,754 | 122,986 | 0 | 0 | 0 | 0 | | |
| 1982 | 0 | 7,984 | 95,776 | 103,760 | 0 | 0 | 0 | 0 | | |
| 1983 | 0 | 5,710 | 100,518 | 106,228 | 0 | 0 | 0 | 0 | | |
| 1984 | 0 | 5,740 | 126,387 | 132,127 | 0 | 0 | 0 | 0 | | |
| 1985 | 0 | 7,563 | 120,823 | 128,386 | 0 | 0 | 0 | 0 | | |
| 1986 | 0 | 8,719 | 131,599 | 140,318 | 0 | 0 | 0 | 0 | | |
| 1987 | 0 | 11,363 | 128,080 | 139,443 | 0 | 0 | 0 | 0 | | |
| 1988 | 0 | 12,831 | 120,969 | 133,800 | 0 | 0 | 0 | 0 | | |
| 1989 | 0 | 11,454 | 116,801 | 128,255 | 0 | 0 | 0 | 0 | | |
| 1990 | 0 | 13,022 | 109,802 | 122,824 | 0 | 0 | 0 | 0 | | |
| 1991 | 0 | 5,802 | 1,496 | 7,298 | 0 | 0 | 0 | 0 | | |
| 1992 | 0 | 7,893 | 79,635 | 87,528 | 0 | 0 | 0 | 0 | | |
| 1993 | 0 | 9,282 | 94,921 | 104,203 | 0 | 0 | 0 | 0 | | |
| 1994 | 0 | 8,515 | 87,158 | 95,673 | 0 | 0 | 0 | 0 | | |
| 1995 | 0 | 6,986 | 94,536 | 101,522 | 0 | 0 | 0 | 0 | | |
| 1996 | 0 | 9,663 | 114,630 | 124,293 | 0 | 0 | 0 | 0 | | |
| 1997 | 527 | 8,343 | 110,428 | 119,298 | 527 | 0 | 8,538 | 9,065 | | |
| 1998 | 0 | 8,415 | 109,400 | 117,815 | 0 | 0 | 22,210 | 22,210 | | |
| 1999 | 0 | 2,453 | 120,061 | 122,514 | 0 | 303 | 23,880 | 24,183 | | |
| 2000 | 0 | (429) | 120,313 | 119,884 | 0 | 0 | 26,703 | 26,703 | | |
| 2001 | 0 | (742) | 87,915 | 87,173 | 0 | 0 | 23,229 | 23,229 | | |
| 2002 | 0 | 638 | 99,783 | 100,421 | 0 | (151) | 31,991 | 31,840 | | |
| 2003 | 0 | 161 | 101,113 | 101,274 | 0 | 284 | 31,421 | 31,705 | | |
| 2004 | 0 | 492 | 104,144 | 104,636 | 0 | 480 | 33,870 | 34,350 | | |
| 2005 | 0 | 1,484 | 103,178 | 104,662 | 0 | 573 | 27,595 | 28,168 | | |
| 2006 | 0 | 1,994 | 115,433 | 117,427 | 0 | 2,034 | 27,484 | 29,518 | | |
| 2007 | 0 | 3,355 | 131,590 | 134,945 | 0 | 293 | 31,516 | 31,809 | | |
| 2008 | 0 | 3,696 | 107,239 | 110,935 | 0 | (30) | 21,795 | 21,765 | | |
| 2009 | 0 | 2,242 | 102,509 | 104,751 | 0 | (3,078) | 19,253 | 16,175 | | |
| 2010 | 0 | 802 | 62,592 | 63,394 | 0 | 212 | 30,894 | 31,106 | | |
| 2011 | 0 | 802 | 131,299 | 132,101 | 0 | 212 | 50,322 | 50,534 | | |
| 2012 | 0 | 802 | 131,299 | 132,101 | 0 | 212 | 50,322 | 50,534 | | |
| 2013 | 0 | 802 | 131,299 | 132,101 | 0 | 212 | 50,322 | 50,534 | | |
| 2014 | 0 | 802 | 131,299 | 132,101 | 0 | 212 | 50,322 | 50,534 | | |
| 2015 | 0 | 802 | 151,463 | 152,265 | 0 | 212 | 70,486 | 70,698 | | |
| 2016 | 0 | 802 | 151,463 | 152,265 | 0 | 212 | 70,486 | 70,698 | | |
| 2017 | 0 | 802 | 151,463 | 152,265 | 0 | 212 | 70,486 | 70,698 | | |
| 2018 | 0 | 802 | 151,463 | 152,265 | 0 | 212 | 70,486 | 70,698 | | |
| 2019 | 0 | 802 | 151,463 | 152,265 | 0 | 212 | 70,486 | 70,698 | | |
| 2020 | 0 | 802 | 151,463 | 152,265 | 0 | 212 | 70,486 | 70,698 | | |
| 2021 | 0 | 802 | 151,463 | 152,265 | 0 | 212 | 70,486 | 70,698 | | |
| 2022 | 0 | 802 | 151,463 | 152,265 | 0 | 212 | 70,486 | 70,698 | | |
| 2023 | 0 | 802 | 151,463 | 152,265 | 0 | 212 | 70,486 | 70,698 | | |
| 2024 | 0 | 802 | 151,463 | 152,265 | 0 | 212 | 70,486 | 70,698 | | |
| 2025 | 0 | 802 | 151,463 | 152,265 | 0 | 212 | 70,486 | 70,698 | | |
| 2026 | 0 | 802 | 151,463 | 152,265 | 0 | 212 | 70,486 | 70,698 | | |
| 2027 | 0 | 802 | 151,463 | 152,265 | 0 | 212 | 70,486 | 70,698 | | |
| 2028 | 0 | 802 | 151,463 | 152,265 | 0 | 212 | 70,486 | 70,698 | | |
| 2029 | 0 | 802 | 151,463 | 152,265 | 0 | 212 | 70,486 | 70,698 | | |
| 2030 | 0 | 802 | 151,463 | 152,265 | 0 | 212 | 70,486 | 70,698 | | |
| 2031 | 0 | 802 | 151,463 | 152,265 | 0 | 212 | 70,486 | 70,698 | | |
| 2032 | 0 | 802 | 151,463 | 152,265 | 0 | 212 | 70,486 | 70,698 | | |
| 2033 | 0 | 802 | 151,463 | 152,265 | 0 | 212 | 70,486 | 70,698 | | |
| 2034 | 0 | 802 | 151,463 | 152,265 | 0 | 212 | 70,486 | 70,698 | | |
| 2035 | 0 | 802 | 151,463 | 152,265 | 0 | 212 | 70,486 | 70,698 | | |

TABLE B-7. Reconciliation of Capital Costs Allocated to Water Supply and Power Generation

(Thousands of Dollars)

| Item | Project Costs Allocated to Water Supply and Power Generation | | | | | | | Capital Costs Allocated to Other Purposes | Total State Water Project Capital Cost |
|--|--|---|--|---|--|---|----------------------------------|---|--|
| | Misc. Income Credited to Construction (a) | Allowance for Future Price Escalation (b) | Costs of Construction of Delivery Structures (c) | Costs of Requested Excess Capacity and Future Enlargement (d) | Capital Cost Component of Delta Water Charge (e) | Capital Cost Component of Transportation Water Charge (f) | Water Supply and Power Total (g) | | |
| | [1] | [2] | [3] | [4] | [5] | [6] | [7] | [8] | [9] |
| CONSERVATION FACILITIES | | | | | | | | | |
| Upper Feather Division | | | | | | | | | |
| Frenchman Dam & Lake | 180 | 0 | 0 | 0 | 602 | 0 | 782 | 2,876 | 3,658 |
| Grizzly Valley Dam & Lake Davis | 65 | 0 | 0 | 0 | 59 | 0 | 124 | 9,354 | 9,478 |
| Antelope Dam & Lake | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 5,863 | 5,864 |
| Abbey Bridge Dam & Reservoir | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 520 | 520 |
| Dixie Refuge Dam & Reservoir | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 236 | 236 |
| Total, Upper Feather Division | 246 | 0 | 0 | 0 | 661 | 0 | 907 | 18,849 | 19,756 |
| Oroville Division | | | | | | | | | |
| Multipurpose Facilities | 62,812 | 0 | 0 | 0 | 430,830 | 0 | 493,642 | 98,555 | 592,197 |
| Specific Power Facilities | 230 | 0 | 0 | 0 | 105,019 | 0 | 105,249 | (1,036) | 104,213 |
| Total I, Oroville Division | 63,042 | 0 | 0 | 0 | 535,849 | 0 | 598,891 | 97,520 | 696,410 |
| California Aqueduct | | | | | | | | | |
| North San Joaquin Division | 1,210 | 0 | 0 | 0 | 81,346 | 0 | 82,556 | 3,173 | 85,729 |
| San Luis Division | 13,152 | 0 | 0 | 0 | 106,202 | 0 | 119,354 | 4,570 | 123,924 |
| Total, California Aqueduct | 14,362 | 0 | 0 | 0 | 187,548 | 0 | 201,910 | 7,743 | 209,653 |
| Delta Facilities | 37,311 | 0 | 0 | 0 | 329,297 | 0 | 366,608 | 14,573 | 381,181 |
| Planning and Pre-Operation | 5,302 | 0 | 0 | 0 | 57,086 | 0 | 62,388 | 0 | 62,388 |
| TOTAL, CONSERVATION FACILITIES | 120,263 | 0 | 0 | 0 | 1,110,441 | 0 | 1,230,704 | 138,685 | 1,369,389 |
| TRANSPORTATION FACILITIES | | | | | | | | | |
| Upper Feather Division | | | | | | | | | |
| Grizzly Valley Pipeline | (33) | 0 | 326 | 0 | 0 | 344 | 637 | 0 | 637 |
| North Bay Aqueduct | 395,941 | 0 | 676 | 0 | 0 | 109,319 | 505,936 | 0 | 505,936 |
| South Bay Aqueduct | 161,437 | 0 | 1,743 | 0 | 0 | 136,165 | 299,345 | 23,441 | 322,786 |
| California Aqueduct | | | | | | | | | |
| North San Joaquin Division | 8,648 | 0 | 108 | 0 | 0 | 194,707 | 203,463 | 7,062 | 210,525 |
| San Luis Division | 9,216 | 0 | 0 | 0 | 0 | 139,901 | 149,117 | 8,188 | 157,305 |
| South San Joaquin Division | 3,494 | 0 | 4,006 | 2,093 | 0 | 301,520 | 311,113 | 17,910 | 329,023 |
| Tehachapi Division | (1,131) | 0 | 0 | 5,230 | 0 | 349,043 | 353,142 | 20,981 | 374,123 |
| Mojave Division | (709) | 0 | 1,112 | 0 | 0 | 324,036 | 324,439 | 40,057 | 364,496 |
| Santa Ana Division | (14,380) | 0 | 6,068 | 5,331 | 0 | 511,336 | 508,355 | 48,892 | 557,248 |
| West Branch | 35,611 | 0 | 461 | 37 | 0 | 565,915 | 602,025 | 36,930 | 638,955 |
| Coastal Branch | (61) | 0 | 176 | 0 | 0 | 500,914 | 501,029 | 0 | 501,029 |
| Total, California Aqueduct | 40,688 | 0 | 11,931 | 12,691 | 0 | 2,887,373 | 2,952,683 | 180,021 | 3,132,704 |
| TOTAL, TRANSPORTATION FACILITIES | 598,033 | 0 | 14,676 | 12,691 | 0 | 3,133,201 | 3,758,601 | 203,461 | 3,962,062 |
| East Branch Enlargement | 0 | 0 | 0 | 0 | 0 | 895,617 | 895,617 | 0 | 895,617 |
| East Branch Extension | 0 | 0 | 0 | 0 | 0 | 361,515 | 361,515 | 0 | 361,515 |
| Coastal Power Allocation | 0 | 0 | 0 | 0 | 0 | 30,708 | 30,708 | 0 | 30,708 |
| Agricultural Drainage Facilities | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 93,756 | 93,756 |
| Off-Aqueduct Power Generation Facilities | 0 | 0 | 0 | 0 | 0 | 496,091 | 496,091 | 0 | 496,091 |
| Small Hydro Power Generation Facilities | 0 | 0 | 0 | 0 | 14,095 | 85,656 | 99,751 | 0 | 99,751 |
| Land Purchase - Kern Water Bank | 0 | 0 | 0 | 0 | 34,686 | 0 | 34,686 | 0 | 34,686 |
| Unassigned / Miscellaneous | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 135,510 | 135,510 |
| Davis-Grunsky | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 130,000 | 130,000 |
| TOTAL THROUGH 2020 | 718,296 | 0 | 14,676 | 12,691 | 1,159,222 | 5,002,788 | 6,907,673 | 701,412 | 7,609,085 |

a) Miscellaneous project receipts that are applied for accounting purposes to reduce the capital costs of the particular facilities.

b) These allowances are included for planning the future financial program, but not for determining current water charges.

c) See Table B-8.

d) See Table B-9.

e) See Table B-13.

f) See Table B-10 (Published Appendix B 132-10 ,blue binder). Mojave Division total reduced by \$86,656,000 for costs included in "Small Hydro Power Generation Facilities" line.

TABLE B-8. SWP Capital Costs of Requested Delivery Structures

| Project Service Area and Water Supply Contractor | (in dollars) | | | | | | |
|---|---------------------------------|----------------|----------------|----------------|----------------|----------|-------------------|
| | Calendar Year Capital Costs (a) | | | | | | Total |
| | 1952-2007 | 2008 | 2009 | 2010 | 2011 | 2012 | |
| | [1] | [2] | [3] | [4] | [5] | [6] | [7] |
| FEATHER RIVER AREA | | | | | | | |
| County of Butte | 161,775 | 62,665 | 7,857 | 35,000 | 5,000 | 0 | 272,297 |
| Plumas County Flood Control and Water Conservation District | 6,499 | 2,224 | 0 | 1,000 | 0 | 0 | 9,723 |
| Thermalito Irrigation District (b) | 43,939 | 0 | 0 | 0 | 0 | 0 | 43,939 |
| Subtotal | 212,213 | 64,889 | 7,857 | 36,000 | 5,000 | 0 | 325,959 |
| NORTH BAY AREA | | | | | | | |
| Napa County Flood Control and Water Conservation District | 13,590 | 0 | 0 | 0 | 0 | 0 | 13,590 |
| Solano County Water Agency | 662,113 | 0 | 0 | 0 | 0 | 0 | 662,113 |
| Subtotal | 675,703 | 0 | 0 | 0 | 0 | 0 | 675,703 |
| SOUTH BAY AREA | | | | | | | |
| Alameda County Flood Control and Water Conservation District, Zone 7 | 415,483 | 0 | 0 | 0 | 0 | 0 | 415,483 |
| Alameda County Water District | 239,579 | 0 | 0 | 0 | 0 | 0 | 239,579 |
| Santa Clara Valley Water District | 21,500 | 0 | 0 | 0 | 0 | 0 | 21,500 |
| San Francisco Water Department (b) | 1,066,680 | 0 | 0 | 0 | 0 | 0 | 1,066,680 |
| Subtotal | 1,743,242 | 0 | 0 | 0 | 0 | 0 | 1,743,242 |
| CENTRAL COASTAL AREA | | | | | | | |
| San Luis Obispo County Flood Control and Water Conservation District | 26,204 | 0 | 0 | 0 | 0 | 0 | 26,204 |
| Santa Barbara County Flood Control and Water Conservation District | 67,058 | 0 | 0 | 0 | 0 | 0 | 67,058 |
| Subtotal | 93,262 | 0 | 0 | 0 | 0 | 0 | 93,262 |
| SAN JOAQUIN VALLEY AREA | | | | | | | |
| Castaic Lake Water Agency | 82,567 | 0 | 0 | 0 | 0 | 0 | 82,567 |
| County of Kings | 0 | 0 | 0 | 10,000 | 25,000 | 0 | 35,000 |
| Dudley Ridge Water District | 304,541 | 0 | 0 | 0 | 0 | 0 | 304,541 |
| Empire West Side Irrigation District | 6,358 | 0 | 0 | 0 | 0 | 0 | 6,358 |
| Green Valley Water District (c) | 5,292 | 0 | 0 | 0 | 0 | 0 | 5,292 |
| Kern County Water Agency | 3,142,578 | 112,761 | 22,341 | 45,000 | 60,000 | 0 | 3,382,680 |
| Oak Flat Water District | 80,363 | 17,280 | 0 | 0 | 0 | 0 | 97,643 |
| Tracy Golf and Country Club (c) | 6,932 | 0 | 0 | 0 | 0 | 0 | 6,932 |
| Tulare Lake Basin Water Storage District | 277,483 | 0 | 0 | 0 | 0 | 0 | 277,483 |
| Veterans Administration Cemetery (b) | 3,342 | 0 | 0 | 0 | 0 | 0 | 3,342 |
| Subtotal | 3,909,456 | 130,041 | 22,341 | 55,000 | 85,000 | 0 | 4,201,838 |
| SOUTHERN CALIFORNIA AREA | | | | | | | |
| Antelope Valley-East Kern Water Agency | 459,821 | 19,609 | 76,710 | 80,000 | 75,000 | 0 | 711,140 |
| Castaic Lake Water Agency | 375,593 | 0 | 0 | 0 | 0 | 0 | 375,593 |
| Coachella Valley Water District | 14,206 | 0 | 0 | 0 | 0 | 0 | 14,206 |
| Crestline-Lake Arrowhead Water Agency | 25,298 | 0 | 0 | 0 | 0 | 0 | 25,298 |
| Desert Water Agency | 23,438 | 0 | 0 | 0 | 0 | 0 | 23,438 |
| Littlerock Creek Irrigation District | 23,732 | 0 | 0 | 0 | 0 | 0 | 23,732 |
| Mojave Water Agency | 211,765 | 0 | 8,310 | 35,000 | 25,000 | 0 | 280,075 |
| Palmdale Water District | 34,173 | 0 | 0 | 0 | 0 | 0 | 34,173 |
| San Bernardino Valley Municipal Water District | 960,685 | 0 | 0 | 0 | 0 | 0 | 960,685 |
| San Gabriel Valley Municipal Water District | 131,052 | 0 | 0 | 0 | 0 | 0 | 131,052 |
| San Geronio Pass Water Agency | 89,081 | 10,446 | 2,648 | 35,000 | 25,000 | 0 | 162,175 |
| The Metropolitan Water District of Southern California | 4,814,078 | 0 | 0 | 0 | 0 | 0 | 4,814,078 |
| Ventura County Watershed Protection District | 79,699 | 0 | 0 | 0 | 0 | 0 | 79,699 |
| Subtotal | 7,242,621 | 30,055 | 87,668 | 150,000 | 125,000 | 0 | 7,635,344 |
| TOTAL | 13,876,497 | 224,985 | 117,866 | 241,000 | 215,000 | 0 | 14,675,348 |

(a) Approximate only, not to be construed as invoice amounts.

(b) Not an SWP water supply contractor.

(c) Not an SWP water supply contractor, but has contracted for water.

TABLE B-9. Capital Costs of Requested Excess Peaking Capacity

(in dollars unless otherwise indicated)

Sheet 1 of 2

| Calendar Year | Total Advance Payments and Credits for Excess Capacity | Total Incremental Costs for Excess Capacity | Over payment (+) or Under payment (-) (a) | Annual Surplus Money Investment Fund Interest Rate (b) | | Net Over or Underpayment With Interest (c) |
|---|--|---|---|--|---------|--|
| | | | | Jan-Jun | Jul-Dec | |
| | [1] | [2] | [3] | [4] | [5] | [6] |
| THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA | | | | | | |
| 1965 | 0 | 158,000 | (158,000) | 3.968% | 4.184% | (163,412) |
| 1966 | 8,056,000 | 435,800 | 7,620,200 | 4.540% | 5.057% | 7,701,103 |
| 1967 | 9,094,963 | 1,878,270 | 7,216,693 | 4.815% | 4.744% | 15,524,533 |
| 1968 | 1,523,252 | 2,887,351 | (1,364,099) | 5.330% | 5.540% | 14,959,187 |
| 1969 | 8,310,651 | 3,059,310 | 5,251,341 | 5.946% | 6.389% | 21,369,973 |
| 1970 | 3,426,736 | 2,397,102 | 1,029,634 | 7.071% | 7.125% | 23,986,083 |
| 1971 | 1,086,045 | 1,146,648 | (60,603) | 5.154% | 5.580% | 25,238,017 |
| 1972 | (4,244,807) | 487,394 | (4,732,201) | 4.477% | 4.977% | 21,532,965 |
| 1973 | (15,913,829) | 25,041 | (15,938,870) | 6.023% | 8.717% | 6,014,116 |
| 1974 | 0 | 37,775 | (37,775) | 9.222% | 10.351% | 6,576,393 |
| 1975 | 0 | 2,085 | (2,085) | 7.089% | 6.791% | 7,038,515 |
| 1976 | 0 | 0 | 0 | 6.048% | 6.021% | 7,469,662 |
| 1977 | 0 | 0 | 0 | 5.788% | 6.182% | 7,923,403 |
| 1978 | 0 | 0 | 0 | 7.171% | 8.096% | 8,539,736 |
| 1979 | 0 | 0 | 0 | 8.979% | 9.671% | 9,354,605 |
| 1980 | 0 | 0 | 0 | 11.500% | 11.500% | 10,461,314 |
| Total | 11,339,011 | 12,514,776 | (1,175,765) | - | - | 10,461,314 |
| SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT | | | | | | |
| 1967 | 0 | 25,730 | (25,730) | 4.815% | 4.744% | (26,611) |
| 1968 | 184,422 | 44,053 | 140,369 | 5.330% | 5.540% | 117,587 |
| 1969 | 49,052 | 38,075 | 10,977 | 5.946% | 6.389% | 136,751 |
| 1970 | 44,911 | 17,959 | 26,952 | 7.071% | 7.125% | 175,186 |
| 1971 | 61,588 | 5,900 | 55,688 | 5.154% | 5.580% | 242,927 |
| 1972 | (20,263) | 6,835 | (27,098) | 4.477% | 4.977% | 226,230 |
| 1973 | (180,465) | 0 | (180,465) | 6.023% | 8.717% | 49,198 |
| 1974 | 0 | 0 | 0 | 9.222% | 10.351% | 54,130 |
| 1975 | 0 | 0 | 0 | 7.089% | 6.791% | 57,952 |
| 1976 | 0 | 0 | 0 | 6.048% | 6.021% | 61,501 |
| 1977 | 0 | 0 | 0 | 5.788% | 6.182% | 65,237 |
| 1978 | 0 | 0 | 0 | 7.171% | 8.096% | 70,312 |
| 1979 | 0 | 0 | 0 | 8.979% | 9.671% | 77,021 |
| 1980 | 0 | 0 | 0 | 11.500% | 11.500% | 86,133 |
| Total | 139,245 | 138,552 | 693 | - | - | 86,133 |
| ANTELOPE VALLEY-EAST KERN WATER AGENCY | | | | | | |
| 1968 | 85,495 | 1,645 | 83,850 | 5.330% | 5.540% | 86,962 |
| 1969 | 52,625 | 6,326 | 46,299 | 5.946% | 6.389% | 140,964 |
| 1970 | 101,648 | 15,076 | 86,572 | 7.071% | 7.125% | 243,222 |
| 1971 | 34,062 | 11,748 | 22,314 | 5.154% | 5.580% | 279,673 |
| 1972 | (12,794) | 2,018 | (14,812) | 4.477% | 4.977% | 277,552 |
| 1973 | (205,354) | 308 | (205,662) | 6.023% | 8.717% | 77,288 |
| 1974 | 0 | 96 | (96) | 9.222% | 10.351% | 84,933 |
| 1975 | 0 | 0 | 0 | 7.089% | 6.791% | 90,929 |
| 1976 | 0 | 190 | (190) | 6.048% | 6.021% | 96,300 |
| 1977 | 0 | 0 | 0 | 5.788% | 6.182% | 102,150 |
| 1978 | 0 | 0 | 0 | 7.171% | 8.096% | 110,096 |
| 1979 | 0 | 0 | 0 | 8.979% | 9.671% | 120,601 |
| 1980 | 0 | 0 | 0 | 11.500% | 11.500% | 134,869 |
| Total | 55,682 | 37,407 | 18,275 | - | - | 134,869 |

(a) Overpayment or underpayment for each calendar year - column (1) minus column (2).

(b) Interest rates shown are annual rates. Interest is credited daily at applicable rates on funds deposited in the State's Surplus Money Investment Fund.

(c) Amounts shown are end-of-year balances. Interest on overpayments is credited at applicable Surplus Money Investment Fund Interest Rates Shown in columns (4) and (5). Interest on underpayments is charged at the 1980 Project Interest Rate of 4.584 percent.

TABLE B-9. Capital Costs of Requested Excess Peaking Capacity

(in dollars)

Sheet 2 of 2

| Reach Number | ANNUAL REQUIRED ADVANCE OF FUNDS | | | | | | | | | | | | | Reach Total |
|--|--|-----------|------------|-----------|-----------|-----------|-----------|-------------|--------------|--------------|-------|------|------------------|----------------|
| | Incremental Costs and Advance Payments by Calendar Year | | | | | | | | | | | | | |
| | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 | 1971 | 1972 | 1973 | 1974 | 1975 | 1976 | 1981 | |
| | [7] | [8] | [9] | [10] | [11] | [12] | [13] | [14] | [15] | [16] | [17] | [18] | [19] | [20] |
| THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA | | | | | | | | | | | | | | |
| Incremental Costs | | | | | | | | | | | | | | |
| 8C | | 1,000 | 1,000 | | | | | | | | | | | 2,000 |
| 8D | | 43,500 | 43,500 | | | | | | | | | | | 87,000 |
| 9 | | 27,000 | 27,000 | 13,500 | | | | | | | | | | 67,500 |
| 10A | | 29,700 | 29,700 | 14,800 | | | | | | | | | | 74,200 |
| 11B | 10,100 | 18,300 | 18,300 | 9,200 | | | | | | | | | | 55,900 |
| 12D | 1,800 | | 19,300 | 25,800 | 12,900 | | | | | | | | | 59,800 |
| 12E | 1,800 | | 12,400 | 18,800 | 10,800 | | | | | | | | | 43,800 |
| 13B | | | 12,600 | 37,800 | 31,600 | | | | | | | | | 82,000 |
| 14A | 2,500 | 500 | 11,100 | 80,216 | 107,504 | 124,069 | 37,519 | 6,413 | 381 | 87 | | | | 370,289 |
| 14B | 1,200 | 1,800 | | 19,100 | 19,100 | 12,800 | | | | | | | | 54,000 |
| 14C | 1,800 | 900 | | 13,500 | 13,500 | 9,000 | | | | | | | | 38,700 |
| 15A | 700 | | 14,000 | 66,947 | 133,357 | 128,099 | 54,821 | 5,327 | 946 | 2,076 | | | | 406,273 |
| 16A | 700 | | 18,900 | 137,894 | 182,000 | 211,608 | 133,927 | 26,203 | 5,767 | 6,156 | | | | 723,155 |
| 17E | | 51,500 | 444,600 | 537,247 | 860,024 | 998,985 | 699,281 | 193,286 | 17,947 | 29,456 | 2,085 | | | 3,834,411 |
| 17F | 109,100 | 261,600 | 261,600 | 261,600 | 261,600 | 239,500 | | | | | | | | 1,395,000 |
| 25 | | | 964,270 | 1,650,947 | 1,426,925 | 673,041 | 221,100 | 256,165 | | | | | | 5,192,448 |
| 28J | | 304,612 | 13,706 | 296,668 | 65,966 | 230,169 | 1,209,586 | 2,017,134 | 235,900 | 4,900 | | | | 4,378,641 |
| Total | 129,700 | 740,412 | 1,891,976 | 3,184,019 | 3,125,276 | 2,627,271 | 2,356,234 | 2,504,528 | 260,941 | 42,675 | 2,085 | | | 16,865,117 |
| Current Adjustment | | | | | | | | | | | | | | |
| 8C through 25 28J | 1. Advance Payments Applied to Incremental Costs Amendment 2 (d) | | | | | | | | | | | | | |
| | 0 | 8,056,000 | 9,094,963 | 1,523,252 | 8,310,651 | 3,426,736 | 1,086,045 | (4,244,807) | (14,381,396) | | | | (356,668) | 12,514,776 |
| | 2. Interest Credits-Amendment 2 (e) | | | | | | | | | | | | | |
| | | | | | | | | | (1,532,433) | | | | (10,104,646) | (11,637,079) |
| | 3. Advance Payments Applied to Incremental Costs Amendment 5 (f) | | | | | | | | | | | | | |
| | 0 | 1,240,000 | 1,483,180 | 2,469,325 | (927,035) | 1,729,160 | 3,215,258 | 2,967,475 | 1,690,000 | (9,488,722) | | | | 4,378,641 |
| | 4. Interest Credits-Amendment 5 (g) | | | | | | | | | | | | | |
| | | | | | | | | | | (2,721,803) | | | | (2,721,803) |
| | 5. Net Required Advance of Funds | | | | | | | | | | | | | |
| | 0 | 9,296,000 | 10,578,143 | 3,992,577 | 7,383,616 | 5,155,896 | 4,301,303 | (1,277,332) | (14,233,829) | (12,210,525) | | | (10,461,314) | 2,524,535 |
| SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT | | | | | | | | | | | | | | |
| Incremental Costs | | | | | | | | | | | | | | |
| 25 | | | 25,730 | 44,053 | 38,075 | 17,959 | 5,900 | 6,835 | | | | | | 138,552 |
| | | | | | | | | | | | | | | |
| | | | 25,730 | 44,053 | 38,075 | 17,959 | 5,900 | 6,835 | | | | | | 138,552 |
| Current Adjustments | | | | | | | | | | | | | | |
| | 1. Advance Payments Applied to Incremental Costs (d) | | | | | | | | | | | | | |
| | | | 0 | 184,422 | 49,052 | 44,911 | 61,588 | (20,263) | (174,133) | | | | (7,025) | 138,552 |
| | 2. Interest Credit | | | | | | | | | | | | | |
| | | | | | | | | | (6,332) | | | | (79,108) | (85,440) |
| | 3. Net Required Advance of Funds | | | | | | | | | | | | | |
| | | | 0 | 184,422 | 49,052 | 44,911 | 61,588 | (20,263) | (180,465) | | | | (h) (86,133) | 53,112 |
| ANTELOPE VALLEY-EAST KERN WATER AGENCY | | | | | | | | | | | | | | |
| Incremental Costs | | | | | | | | | | | | | | |
| 29A | | | | 1,645 | 6,326 | 13,376 | 10,048 | 2,018 | 308 | 96 | | 190 | | 34,007 |
| 29F | | | | | | 1,700 | 1,700 | | | | | | | 3,400 |
| | | | | | | | | | | | | | | |
| | | | | 1,645 | 6,326 | 15,076 | 11,748 | 2,018 | 308 | 96 | | 190 | | 37,407 |
| Current Adjustment | | | | | | | | | | | | | | |
| | 1. Advance Payments Applied to Incremental Costs (d) | | | | | | | | | | | | | |
| | | | | 85,495 | 52,625 | 101,648 | 34,062 | (12,794) | (189,120) | 0 | | 0 | (34,509) | 37,407 |
| | 2. Interest Credit | | | | | | | | | | | | | |
| | | | | | | | | | (16,234) | | | | (100,360) | (116,594) |
| | 3. Net Required Advance of Funds | | | | | | | | | | | | | |
| | | | | 85,495 | 52,625 | 101,648 | 34,062 | (12,794) | (205,354) | 0 | | 0 | (h) (134,869) | (79,187) |

(d) Actual payments are shown for 1965 through 1976 with 1981 adjusted to reflect overpayments and underpayments without interest for prior years.

(e) Interest for overpayments and underpayments under provisions of Amendment 2 of the contract.

(f) Actual payments are shown for 1965 through 1973 with 1974 adjusted to reflect overpayments and underpayments without interest for prior years.

(g) Interest for overpayments and underpayments under provisions of Amendment 5 of the contract.

(h) Amounts in excess of incremental costs, under the provisions of the contract, reduce the Transportation Charge capital cost component of the Agency's Statement of Charges for January 1981.

**TABLE B-10. Capital Costs of Each Aqueduct Reach to be Reimbursed
through Capital Cost Component of Transportation Charge**

(in dollars)

Sheet 1 of 8

| Calendar Year | UPPER FEATHER DIVISION | NORTH BAY AQUEDUCT | | | | | SOUTH BAY AQUEDUCT | | | |
|------------------|------------------------------|--------------------|------------|-----------|------------|-------------|--------------------|-----------|------------|------------|
| | | Reach 1 | Reach 2 | Reach 3A | Reach 3B | Total | Reach 1 | Reach 2 | Reach 4 | Reach 5 |
| | [1] | [2] | [3] | [4] | [5] | [6] | [7] | [8] | [9] | [10] |
| 1952 | 0 | 0 | 0 | 0 | 0 | 0 | 97 | 34 | 30 | 57 |
| 1953 | 0 | 0 | 0 | 0 | 0 | 0 | 477 | 166 | 144 | 297 |
| 1954 | 0 | 0 | 0 | 0 | 0 | 0 | 1,466 | 508 | 437 | 959 |
| 1955 | 0 | 0 | 0 | 0 | 0 | 0 | 1,944 | 674 | 560 | 1,266 |
| 1956 | 0 | 0 | 0 | 0 | 0 | 0 | 18,789 | 6,515 | 5,090 | 12,545 |
| 1957 | 0 | 13,290 | 3,391 | 0 | 9,953 | 26,634 | 45,090 | 15,639 | 12,285 | 33,218 |
| 1958 | 2 | 19,202 | 5,011 | 0 | 25,798 | 50,011 | 195,985 | 80,961 | 7,714 | 21,930 |
| 1959 | 14 | 7,517 | 2,118 | 0 | 17,653 | 27,288 | 496,140 | 148,516 | 24,945 | 17,118 |
| 1960 | 28 | 8,797 | 4,292 | 0 | 4,838 | 17,927 | 1,130,378 | 67,351 | 71,779 | 68,028 |
| 1961 | 10 | 1,551 | 10,318 | 0 | 2,526 | 14,395 | 3,273,247 | 180,596 | 307,885 | 74,398 |
| 1962 | 32 | 217 | (1,751) | 0 | 414 | (1,120) | 1,548,884 | 203,535 | 695,446 | 35,102 |
| 1963 | 51 | 2,510 | (1,063) | 0 | 983 | 2,430 | 480,716 | 69,182 | 2,284,291 | 206,587 |
| 1964 | 7,791 | 39,879 | 12,046 | 0 | 21,934 | 73,859 | 2,549,118 | 15,903 | 181,900 | 264,410 |
| 1965 | 3,139 | 72,793 | 17,900 | 0 | 170,361 | 261,054 | 807,505 | 153,454 | 85,425 | 447,830 |
| 1966 | (48) | 59,615 | 12,972 | 0 | 438,949 | 511,536 | 898,074 | 149,529 | 142,096 | 1,690,200 |
| 1967 | 47 | 47,257 | 11,597 | 0 | 1,551,023 | 1,609,877 | 607,614 | 50,423 | 293,304 | 3,496,284 |
| 1968 | 51,573 | 70,586 | 19,560 | 0 | 831,158 | 921,304 | 965,119 | 19,543 | 89,300 | 2,931,101 |
| 1969 | 234,232 | 63,650 | 23,628 | 0 | 46,428 | 133,706 | 455,173 | 9,618 | 3,860 | 896,727 |
| 1970 | 16,227 | 59,090 | 42,733 | 0 | 9,415 | 111,238 | 52,481 | 3,380 | 10,517 | 154,358 |
| 1971 | 27,204 | 20,819 | 31,516 | 0 | 8,480 | 60,815 | 24,505 | 4,645 | 5,035 | 20,395 |
| 1972 | 9 | 15,538 | 12,952 | 0 | 10,058 | 38,548 | 26,918 | 825 | 2,945 | 26,090 |
| 1973 | 25 | 18,488 | 29,018 | 0 | 39,878 | 87,384 | 24,468 | 4,010 | 6,016 | 12,708 |
| 1974 | 45 | 67,352 | 29,978 | 0 | 134,332 | 231,662 | 17,108 | 1,192 | 1,765 | 65,587 |
| 1975 | 21 | 62,855 | 73,112 | 0 | 45,091 | 181,058 | 57,619 | 561 | 1,165 | 7,291 |
| 1976 | 51 | 52,419 | 75,611 | 218 | 13,168 | 141,416 | 104,242 | 2,846 | 8,915 | 12,701 |
| 1977 | 28 | 53,274 | 65,662 | 2,240 | 23,138 | 144,314 | 176,062 | 3,625 | 3,225 | 16,158 |
| 1978 | 38 | 61,936 | 57,158 | 2,955 | 28,987 | 151,036 | 264,581 | 4,494 | 3,668 | 14,028 |
| 1979 | 23 | 316,620 | 91,367 | 3,953 | 62,240 | 474,180 | 111,106 | 17,151 | 8,515 | 31,725 |
| 1980 | 26 | 422,804 | 111,600 | 19,910 | 96,125 | 650,439 | 368,942 | 17,708 | 8,249 | 38,045 |
| 1981 | 34 | 430,992 | 147,295 | (10,752) | 43,157 | 610,692 | (145,428) | 3,600 | 6,533 | 12,448 |
| 1982 | 11 | 934,812 | 357,720 | (7,165) | 134,408 | 1,419,775 | (44,778) | 18,971 | 7,451 | 37,824 |
| 1983 | 19 | 1,091,091 | 1,076,627 | 2,628 | 517,615 | 2,687,961 | 429,225 | 73,925 | 38,185 | 72,415 |
| 1984 | 26 | 1,875,968 | 2,317,661 | 3,290 | 1,068,363 | 5,265,282 | 506,951 | 36,354 | 9,610 | 92,846 |
| 1985 | 29 | 2,248,491 | 7,849,886 | 27,815 | 3,416,370 | 13,542,562 | 34,103 | 2,822 | 5,034 | 27,138 |
| 1986 | 31 | 16,420,238 | 10,020,277 | 1,309,599 | 1,819,349 | 29,569,463 | 85,732 | 14,715 | 17,144 | 13,982 |
| 1987 | 32 | 11,873,826 | 7,214,307 | 1,628,932 | 1,670,596 | 22,387,661 | 126,377 | 15,693 | 27,881 | 32,931 |
| 1988 | 55 | 3,287,756 | 1,648,431 | 1,015,971 | 686,821 | 6,638,979 | 290,505 | 36,744 | 51,786 | 25,078 |
| 1989 | 44 | 1,056,583 | 950,985 | 224,567 | 374,886 | 2,607,021 | 130,609 | 16,848 | 35,518 | 12,582 |
| 1990 | 63 | 493,522 | 537,881 | 145,694 | 71,938 | 1,249,035 | 275,732 | 32,387 | 99,251 | 40,263 |
| 1991 | 54 | 76,599 | 17,130 | 24,846 | 70,542 | 189,117 | 1,153,109 | 26,900 | 53,613 | 21,889 |
| 1992 | 42 | 56,492 | 6,525 | 18,333 | 37,778 | 119,128 | 401,906 | 53,036 | 61,799 | 51,386 |
| 1993 | 30 | 104,317 | 24,579 | 40,129 | 82,032 | 251,057 | 313,476 | 55,679 | 79,149 | 39,293 |
| 1994 | 14 | 68,065 | 13,463 | 27,107 | 45,909 | 154,544 | (211,712) | 29,017 | 362,585 | 36,350 |
| 1995 | 3 | 26,002 | 5,920 | 7,337 | 20,617 | 59,876 | 265,751 | 42,516 | 48,189 | 21,436 |
| 1996 | 0 | 14,790 | 3,334 | 6,614 | 14,606 | 39,344 | 139,573 | 13,049 | 25,751 | 10,677 |
| 1997 | 3 | 67,264 | 35,545 | 38,585 | (13,571) | 127,823 | 203,476 | 31,135 | 36,986 | 16,906 |
| 1998 | 7 | 15,410 | 6,392 | 6,797 | 10,396 | 38,995 | 67,974 | 6,120 | 14,731 | 4,616 |
| 1999 | 2 | 71,950 | 35,515 | 33,879 | 32,613 | 173,957 | 162,161 | 25,329 | 35,716 | 24,347 |
| 2000 | 24 | 29,992 | 8,327 | 11,711 | 4,156 | 54,186 | 100,654 | 15,688 | 24,144 | 19,652 |
| 2001 | 20 | 10,597 | 3,904 | 3,892 | 1,954 | 20,347 | 436,756 | 4,272 | 118,836 | 4,207 |
| 2002 | 14 | 27,018 | 18,971 | 15,254 | 4,614 | 65,857 | 3,068,535 | 5,648 | 329,244 | 64,425 |
| 2003 | 0 | 14,733 | 9,243 | 4,658 | 46,313 | 74,947 | 4,465,569 | 200,125 | 199,457 | 360,387 |
| 2004 | 0 | 23,929 | 2,214 | 2,341 | 145,290 | 173,774 | 1,257,335 | 120,340 | 131,702 | 99,547 |
| 2005 | 0 | 89,345 | 190 | 9 | 33,932 | 123,476 | 1,224,471 | 119,296 | 260,887 | (83) |
| 2006 | 5 | 28,341 | 304 | 145 | 879,442 | 908,232 | 2,840,726 | 68,417 | 259,637 | 573 |
| 2007 | 0 | 61,402 | 40 | 35 | 3,219,048 | 3,280,525 | 3,069,791 | 15,211 | 70,835 | 1,915 |
| 2008 | 4 | 75,166 | 6,097 | 5,347 | 7,878,430 | 7,965,040 | 5,592,562 | 35,913 | 169,940 | 5,124 |
| 2009 | 13 | 27,617 | 866 | 463 | 1,188,847 | 1,217,793 | 9,803,255 | 1,029,805 | 1,545,796 | 2,406 |
| 2010 | 303 | 60,199 | 10,345 | 2,048 | 46,134 | 118,726 | 8,500,532 | 995,046 | 3,301,357 | 10,764,238 |
| 2011 | 303 | 370,870 | 8,052 | 0 | 178,437 | 557,359 | 1,534,955 | 705,677 | 1,762,173 | 20,829 |
| 2012 | 303 | 371,255 | 8,052 | 0 | 178,624 | 557,931 | 253,019 | 55,291 | 220,492 | 20,694 |
| 2013 | 303 | 390,712 | 8,052 | 0 | 188,060 | 586,824 | 269,291 | 58,959 | 235,163 | 21,619 |
| 2014 | 303 | 291,264 | 8,052 | 0 | 139,829 | 439,145 | 200,949 | 43,555 | 173,544 | 17,737 |
| 2015 | 303 | 29,981 | 8,052 | 0 | 13,112 | 51,145 | 20,186 | 2,809 | 10,561 | 7,469 |
| 2016 | 303 | 19,206 | 8,052 | 0 | 7,887 | 35,145 | 12,729 | 1,128 | 3,837 | 7,045 |
| 2017 | 303 | 19,206 | 8,052 | 0 | 7,887 | 35,145 | 12,729 | 1,128 | 3,837 | 7,045 |
| 2018 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2019 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2020 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2021 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2022 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2023 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2024 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2025 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2026 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2027 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2028 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2029 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2030 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2031 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2032 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2033 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2034 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2035 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 343,571 | 43,713,060 | 33,127,064 | 4,619,385 | 27,859,351 | 109,318,860 | 61,552,634 | 5,245,732 | 14,104,860 | 22,616,379 |

**TABLE B-10. Capital Costs of Each Aqueduct Reach to be Reimbursed
through Capital Cost Component of Transportation Charge**

(in dollars)

Sheet 2 of 8

| Calendar Year | SOUTH BAY AQUEDUCT (continued) | | | | | CALIFORNIA AQUEDUCT NORTH SAN JOAQUIN DIVISION | | | |
|------------------|-----------------------------------|-----------|-----------|------------|-------------|---|------------|------------|-------------|
| | Reach 6 | Reach 7 | Reach 8 | Reach 9 | Total | Reach 1 | Reach 2A | Reach 2B | Subtotal |
| | [11] | [12] | [13] | [14] | [15] | [16] | [17] | [18] | [19] |
| 1952 | 8 | 66 | 72 | 132 | 496 | 4,012 | 3,279 | 1,499 | 8,790 |
| 1953 | 38 | 327 | 336 | 640 | 2,425 | 10,559 | 8,589 | 3,964 | 23,112 |
| 1954 | 123 | 1,005 | 1,003 | 1,954 | 7,455 | 13,796 | 11,163 | 5,179 | 30,138 |
| 1955 | 160 | 1,293 | 1,149 | 2,454 | 9,500 | 7,370 | 5,952 | 2,760 | 16,082 |
| 1956 | 1,559 | 11,959 | 11,043 | 28,372 | 95,872 | 9,880 | 5,020 | 2,398 | 17,298 |
| 1957 | 3,659 | 28,675 | 27,385 | 563,114 | 729,065 | 11,953 | 5,456 | 2,612 | 20,021 |
| 1958 | 2,243 | 17,872 | 17,385 | 590,904 | 904,994 | 18,585 | 17,191 | 7,994 | 43,770 |
| 1959 | 357 | 3,200 | 3,568 | 149,874 | 843,718 | 123,170 | 100,306 | 45,510 | 268,986 |
| 1960 | 1,102 | 2,944 | 4,498 | 359,749 | 1,705,829 | 191,408 | 102,136 | 48,968 | 342,512 |
| 1961 | 4,726 | 18,325 | 22,765 | (1,367) | 3,880,575 | 153,765 | 195,947 | 42,843 | 392,555 |
| 1962 | 17,295 | 160,939 | 178,242 | 209,042 | 3,048,485 | 612,258 | 491,225 | 168,218 | 1,271,701 |
| 1963 | 265,414 | 1,250,386 | 939,832 | 129,902 | 5,626,310 | 1,993,284 | 1,525,734 | 684,095 | 4,203,113 |
| 1964 | 100,603 | 1,716,371 | 2,327,770 | 2,947,522 | 10,103,529 | 4,674,280 | 2,369,858 | 700,074 | 7,744,212 |
| 1965 | 42,345 | 368,476 | 637,266 | 1,921,844 | 4,464,145 | 5,877,189 | 6,873,699 | 2,975,719 | 15,726,607 |
| 1966 | 17,663 | 34,915 | 140,350 | 777,887 | 3,850,714 | 8,553,362 | 14,112,820 | 5,677,099 | 28,343,281 |
| 1967 | (41,567) | 137,856 | 147,183 | 379,764 | 5,070,861 | 9,678,607 | 10,672,113 | 6,646,739 | 26,997,459 |
| 1968 | 84,553 | 2,130 | 68,057 | 253,152 | 4,412,955 | 6,392,664 | 891,681 | 1,303,186 | 8,587,531 |
| 1969 | 4,279 | 11,572 | 162,300 | 32,000 | 1,575,529 | 3,542,767 | 792,259 | 443,924 | 4,778,950 |
| 1970 | 2,487 | 6,820 | 20,086 | (15,718) | 234,411 | 2,236,607 | 149,692 | 115,578 | 2,501,877 |
| 1971 | 4,350 | 6,923 | 17,750 | 39,084 | 122,687 | 98,138 | 215,512 | 69,410 | 383,060 |
| 1972 | 1,084 | 203 | 4,800 | 32,199 | 95,064 | 159,608 | 43,721 | 7,744 | 211,073 |
| 1973 | 288 | 989 | 7,449 | 9,693 | 65,621 | 105,581 | 25,496 | 22,418 | 153,495 |
| 1974 | 527 | 6,020 | 30,628 | 11,433 | 134,260 | 177,700 | 16,627 | 45,707 | 240,034 |
| 1975 | 126 | 679 | 1,086 | 3,464 | 71,991 | 239,144 | 14,680 | 169,676 | 423,500 |
| 1976 | 701 | 3,529 | 8,362 | 26,186 | 167,482 | 641,860 | 45,533 | 65,943 | 753,336 |
| 1977 | 270 | 1,310 | 8,651 | 24,938 | 234,239 | 274,381 | 20,283 | 22,568 | 317,232 |
| 1978 | 231 | 1,204 | 1,631 | 17,123 | 306,960 | 801,265 | 36,221 | 9,714 | 847,200 |
| 1979 | 1,367 | 1,721 | 2,134 | 7,322 | 181,041 | 1,051,792 | 59,695 | 26,106 | 1,137,593 |
| 1980 | 1,321 | 1,718 | 2,182 | 7,102 | 445,267 | 4,173,603 | 96,760 | 38,789 | 4,309,152 |
| 1981 | 308 | 1,462 | 1,398 | 5,077 | (114,602) | (502,921) | 1,487,516 | 38,451 | 1,023,046 |
| 1982 | 716 | 1,561 | 1,746 | 6,074 | 29,565 | 700,738 | 46,501 | 22,308 | 769,547 |
| 1983 | 407 | 5,721 | 8,143 | 23,367 | 651,388 | 706,104 | 84,435 | 211,619 | 1,002,158 |
| 1984 | 269 | 1,853 | 1,667 | 13,301 | 662,851 | 1,559,539 | 41,352 | 48,478 | 1,649,369 |
| 1985 | 402 | 1,657 | 2,129 | 6,750 | 80,035 | 677,955 | 24,812 | 19,404 | 722,171 |
| 1986 | 1,119 | 2,744 | 3,313 | 12,234 | 150,983 | 398,788 | 63,830 | 35,420 | 498,038 |
| 1987 | 1,496 | 3,081 | 3,560 | 21,842 | 232,861 | 799,672 | 88,945 | 41,659 | 930,276 |
| 1988 | 5,706 | 6,689 | 7,603 | 33,728 | 457,839 | 2,898,156 | (128,051) | (56,448) | 2,713,657 |
| 1989 | 2,641 | 3,878 | 4,755 | 14,489 | 221,320 | 6,898,872 | 346,589 | 173,993 | 7,419,454 |
| 1990 | 5,092 | 19,899 | 36,584 | 87,796 | 597,004 | 13,483,785 | 112,002 | 2,446,232 | 16,042,019 |
| 1991 | 1,942 | 5,059 | 7,357 | 31,682 | 1,301,551 | 13,914,632 | 133,121 | 114,981 | 14,162,734 |
| 1992 | 1,184 | 2,042 | 2,250 | 35,464 | 609,067 | 6,260,482 | 241,456 | 239,437 | 6,741,375 |
| 1993 | 3,618 | 6,028 | 8,873 | 42,200 | 548,316 | 2,542,869 | 257,330 | 200,072 | 3,000,271 |
| 1994 | 2,897 | 4,781 | 5,346 | 89,991 | 319,255 | 1,145,666 | 148,396 | 88,357 | 1,382,419 |
| 1995 | 11,556 | 3,635 | 14,769 | 24,750 | 432,602 | 1,462,211 | 217,940 | 131,995 | 1,812,146 |
| 1996 | 3,092 | 2,271 | 2,699 | 12,522 | 209,634 | 874,227 | 74,153 | 41,215 | 989,595 |
| 1997 | 1,454 | 4,141 | 3,655 | 20,589 | 318,342 | 2,064,446 | 146,851 | 84,303 | 2,295,600 |
| 1998 | 363 | 1,134 | (6,005) | 5,776 | 94,709 | 729,475 | 33,695 | 16,670 | 779,840 |
| 1999 | 1,533 | 3,304 | 12,727 | 31,634 | 296,751 | 2,208,776 | 89,951 | 90,639 | 2,388,366 |
| 2000 | 2,406 | 4,944 | 5,331 | 10,755 | 183,574 | (706,517) | 57,503 | 40,185 | (608,629) |
| 2001 | 91,721 | 68,849 | 404,226 | 1,190,653 | 2,319,520 | 371,407 | 91,792 | 8,926 | 472,125 |
| 2002 | 229,409 | 453,259 | 1,107,580 | 2,977,939 | 8,236,039 | 388,781 | 44,543 | 22,639 | 455,963 |
| 2003 | 67,216 | 509,964 | 477,926 | 1,409,228 | 7,689,872 | 178,162 | 22,779 | 13,565 | 214,506 |
| 2004 | 3,193 | 3,100 | 39,326 | 3,276,907 | 4,931,450 | 892,410 | 15,333 | 77,640 | 985,383 |
| 2005 | 5,340 | 5,267 | 4,842 | 731,498 | 2,351,518 | 294,112 | 40,105 | 98,484 | 432,701 |
| 2006 | 1,298 | 1,356 | 1,365 | 15,428 | 3,188,800 | 315,146 | 15,235 | 178,094 | 508,475 |
| 2007 | 7,478 | 7,479 | 7,478 | 10,751 | 3,190,938 | 298,687 | 58,266 | 122,056 | 479,009 |
| 2008 | 8,421 | 8,737 | 8,938 | 12,436 | 5,842,071 | 767,885 | 39,837 | 85,661 | 893,383 |
| 2009 | 3,153 | 3,389 | 3,470 | 5,076 | 12,396,350 | 424,939 | 42,671 | 30,960 | 498,570 |
| 2010 | 6,203 | 9,277 | 10,012 | 17,672 | 23,604,337 | 750,176 | 60,631 | 30,793 | 841,600 |
| 2011 | 55,189 | 58,183 | 58,990 | 87,464 | 4,283,460 | 2,815,338 | 253,254 | 2,792,550 | 5,861,142 |
| 2012 | 54,652 | 57,646 | 58,453 | 86,694 | 806,941 | 3,843,865 | 265,500 | 132,513 | 4,241,878 |
| 2013 | 58,320 | 61,314 | 62,121 | 91,962 | 858,749 | 1,179,068 | 266,077 | 132,801 | 1,577,946 |
| 2014 | 42,916 | 45,910 | 46,717 | 69,835 | 641,163 | 748,835 | 204,408 | 101,967 | 1,055,210 |
| 2015 | 2,170 | 5,164 | 5,971 | 11,309 | 65,639 | 81,779 | 41,884 | 20,705 | 144,368 |
| 2016 | 489 | 3,483 | 4,290 | 8,895 | 41,896 | 66,221 | 35,295 | 17,411 | 118,927 |
| 2017 | 489 | 3,483 | 4,290 | 8,895 | 41,896 | 66,221 | 35,295 | 17,411 | 118,927 |
| 2018 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2019 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2020 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2021 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2022 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2023 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2024 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2025 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2026 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2027 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2028 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2029 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2030 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2031 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2032 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2033 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2034 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2035 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 1,203,170 | 5,191,171 | 7,228,858 | 19,022,428 | 136,165,232 | 123,428,575 | 44,008,880 | 27,269,580 | 194,707,035 |

**TABLE B-10. Capital Costs of Each Aqueduct Reach to be Reimbursed
through Capital Cost Component of Transportation Charge**

(in dollars)

Sheet 3 of 8

| Calendar Year | CALIFORNIA AQUEDUCT (continued) | | | | | | | | |
|------------------|---------------------------------|-------------|-------------|-----------|-------------|-------------|----------------------------|------------|------------|
| | SAN LUIS DIVISION | | | | | | SOUTH SAN JOAQUIN DIVISION | | |
| | Reach 3 | Reach 4 | Reach 5 | Reach 6 | Reach 7 | Subtotal | Reach 8C | Reach 8D | Reach 9 |
| | [20] | [21] | [22] | [23] | [24] | [25] | [26] | [27] | [28] |
| 1952 | 2,492 | 3,549 | 3,987 | 1,010 | 1,390 | 12,428 | 13 | 727 | 1,109 |
| 1953 | 6,999 | 10,144 | 10,986 | 2,834 | 3,869 | 34,832 | 45 | 2,671 | 4,185 |
| 1954 | 8,704 | 12,545 | 13,693 | 3,520 | 4,766 | 43,228 | 50 | 2,719 | 4,026 |
| 1955 | 4,273 | 6,055 | 6,813 | 1,728 | 2,325 | 21,194 | 19 | 888 | 1,100 |
| 1956 | 3,295 | 5,600 | 5,857 | 1,445 | 3,556 | 19,753 | 98 | 3,850 | 4,376 |
| 1957 | 3,543 | 6,115 | 6,357 | 1,565 | 3,998 | 21,578 | 234 | 10,604 | 13,209 |
| 1958 | 11,927 | 19,393 | 22,037 | 5,509 | 7,512 | 66,378 | 375 | 19,033 | 25,073 |
| 1959 | 21,979 | 37,358 | 39,689 | 9,813 | 19,679 | 128,518 | 436 | 20,578 | 25,697 |
| 1960 | 207,025 | 45,419 | 41,044 | 12,074 | 37,633 | 343,195 | 1,673 | 44,565 | 25,290 |
| 1961 | 184,443 | 292,639 | 170,559 | 38,338 | 70,068 | 756,047 | 3,949 | 75,726 | 30,852 |
| 1962 | 495,836 | 549,984 | 252,698 | 22,397 | 26,967 | 1,347,882 | 6,131 | 159,481 | 62,375 |
| 1963 | 2,772,189 | 2,034,351 | 2,498,712 | 66,353 | 30,647 | 7,402,252 | 5,861 | 161,252 | 81,343 |
| 1964 | 4,348,311 | 4,932,301 | 1,053,227 | 161,422 | 251,461 | 10,746,722 | 4,014 | 90,622 | 117,907 |
| 1965 | 3,860,997 | 5,688,252 | 2,869,931 | 1,072,111 | 667,768 | 14,159,059 | 15,049 | 491,042 | 564,036 |
| 1966 | 2,312,372 | 8,527,843 | 5,765,798 | 4,230,221 | 7,708,334 | 28,544,568 | 201,274 | 5,197,322 | 2,539,278 |
| 1967 | (44,527) | 2,062,305 | 6,942,522 | 222,885 | 6,675,398 | 15,858,583 | 212,285 | 4,982,844 | 3,363,650 |
| 1968 | 119,884 | 395,689 | 973,956 | 179,917 | 461,031 | 2,130,477 | 64,234 | 611,192 | 940,074 |
| 1969 | (6,065) | 126,946 | 98,492 | 107,486 | 160,668 | 487,527 | 58,960 | 116,146 | 85,130 |
| 1970 | 32,387 | (20,243) | 105,385 | (827,457) | 1,215,966 | 506,038 | 23,011 | 106,810 | 84,116 |
| 1971 | 99,945 | 230,624 | 305,227 | 26,995 | 341,010 | 1,003,801 | 8,813 | 33,099 | 23,088 |
| 1972 | 15,990 | 90,852 | 17,053 | 14,621 | 281,343 | 419,859 | 10,818 | 13,349 | 16,603 |
| 1973 | 6,753 | 103,707 | 41,549 | 13,810 | 41,427 | 207,246 | 5,145 | 11,089 | 13,249 |
| 1974 | 6,618 | 117,165 | 55,978 | 16,199 | 71,796 | 267,756 | 5,434 | 24,433 | 16,567 |
| 1975 | 18,921 | 107,275 | 23,671 | 8,797 | 152,574 | 311,238 | 5,424 | 15,960 | 12,966 |
| 1976 | 17,485 | 79,554 | 13,041 | 5,138 | 41,687 | 156,905 | 19,931 | 76,280 | 62,164 |
| 1977 | 35,707 | 84,689 | 9,412 | 4,028 | 9,655 | 143,471 | 21,096 | 70,005 | 97,952 |
| 1978 | 8,539 | 428,395 | 7,006 | 3,536 | 6,994 | 454,470 | 7,594 | 40,453 | 17,395 |
| 1979 | (35,394) | 543,225 | 19,463 | 9,485 | (242,253) | 294,526 | 10,474 | 6,181 | 6,227 |
| 1980 | 66,622 | 3,450,695 | 191,307 | 75,209 | 185,384 | 3,969,217 | 2,158 | 17,492 | 17,706 |
| 1981 | 28,491 | (2,244,127) | (44,017) | (15,456) | 918,984 | (1,356,125) | 1,151 | 9,642 | 9,541 |
| 1982 | 100,629 | (1,616,569) | 20,184 | 10,359 | 3,525,738 | 2,040,341 | 2,469 | 8,283 | 6,956 |
| 1983 | 75,639 | 33,881 | 11,785 | 6,638 | 1,811,638 | 1,939,581 | 7,955 | 13,782 | 11,090 |
| 1984 | 31,748 | 87,083 | 26,712 | 12,754 | 3,053,662 | 3,211,959 | 26,489 | 9,959 | 6,268 |
| 1985 | 53,251 | 56,732 | 13,685 | 6,934 | 582,910 | 713,512 | 7,220 | 9,762 | 7,688 |
| 1986 | 73,979 | 201,509 | 50,668 | 19,223 | 1,282,469 | 1,627,848 | 8,902 | 25,011 | 20,503 |
| 1987 | (7,829) | 116,268 | 40,009 | 15,946 | 518,349 | 682,743 | 12,744 | 18,927 | 56,042 |
| 1988 | (149,385) | 224,154 | (406,398) | (137,353) | 923,622 | 454,640 | 9,833 | (119,741) | (60,639) |
| 1989 | 39,652 | 594,894 | 232,852 | 80,090 | 575,855 | 1,523,343 | 5,279 | 91,501 | 278,061 |
| 1990 | 39,270 | 259,895 | 79,589 | 29,606 | 461,219 | 869,579 | 5,814 | 41,345 | 2,016,434 |
| 1991 | 4,916,134 | 397,959 | 98,847 | 35,860 | 511,519 | 5,960,319 | 4,588 | 43,140 | 41,348 |
| 1992 | (757,001) | 545,729 | 211,854 | 74,544 | 396,398 | 471,524 | 3,546 | 103,695 | 109,225 |
| 1993 | 110,233 | 724,929 | 186,271 | 70,815 | 720,283 | 1,812,531 | 15,016 | 101,634 | 90,929 |
| 1994 | 1,151,976 | 288,018 | 63,862 | 27,812 | 710,770 | 2,242,438 | 6,770 | 42,455 | 40,696 |
| 1995 | 285,776 | 441,479 | 130,761 | 58,640 | 1,914,186 | 2,830,842 | 12,548 | 49,963 | 43,251 |
| 1996 | 31,942 | (110,471) | 34,529 | 12,219 | 588,712 | 556,931 | 6,444 | 29,863 | 27,050 |
| 1997 | 73,224 | 513,793 | (277,781) | 42,881 | 5,016,215 | 5,368,332 | 11,497 | 49,111 | 43,799 |
| 1998 | 19,692 | 304,115 | 34,319 | 16,542 | 2,619,556 | 3,194,224 | 2,562 | 11,115 | 8,955 |
| 1999 | 18,187 | 158,902 | 100,061 | 41,691 | 1,901,362 | 2,220,223 | 5,706 | 25,179 | 23,510 |
| 2000 | 101,618 | 373,699 | 78,036 | 36,186 | 1,139,073 | 1,728,612 | 3,922 | 23,591 | 29,281 |
| 2001 | (10,513) | (47,112) | 519,031 | (3,546) | 61,595 | 519,455 | 2,280 | 17,030 | 21,196 |
| 2002 | 12,237 | 24,434 | 6,079,343 | 3,454 | (2,453,483) | 3,665,985 | 3,627 | 44,010 | 20,221 |
| 2003 | 8,864 | 79,647 | (5,377,004) | 7,923 | 2,183,795 | (3,096,775) | 2,130 | 18,793 | 16,716 |
| 2004 | (16,126) | (14,365) | (50,563) | (2,487) | (459,225) | (542,766) | 22,520 | 5,980 | 3,879 |
| 2005 | 261 | 11,349 | 129,456 | 3,526 | 995,247 | 1,139,839 | 26,301 | 11,586 | 6,317 |
| 2006 | 1,421 | 27,660 | (10,636) | 1,445 | (366,921) | (347,031) | 6,106 | 2,944 | 1,622 |
| 2007 | 2 | 96,187 | 37,347 | 10,296 | (9,209) | 134,623 | 13,352 | 21,920 | 11,909 |
| 2008 | 15,001 | 17,438 | 47,705 | 14,052 | 1,141,380 | 1,235,576 | 9,017 | 13,020 | 7,277 |
| 2009 | 1,221 | 381,432 | 74,276 | 5,345 | (27,734) | 434,540 | 2,380 | 16,160 | 8,894 |
| 2010 | 13,501 | 4,005,317 | 46,722 | 14,739 | 32,232 | 4,112,511 | 713 | 19,239 | 11,769 |
| 2011 | 13,501 | 1,525,819 | 179,449 | 58,980 | 120,718 | 1,898,467 | 713 | 100,671 | 56,010 |
| 2012 | 13,501 | 473,725 | 187,599 | 61,697 | 126,151 | 862,673 | 713 | 105,672 | 58,726 |
| 2013 | 13,501 | 474,139 | 187,983 | 61,825 | 126,408 | 863,856 | 713 | 105,908 | 58,854 |
| 2014 | 13,501 | 405,403 | 146,938 | 48,144 | 99,044 | 713,030 | 713 | 80,725 | 45,173 |
| 2015 | 13,501 | 36,146 | 38,766 | 12,087 | 26,927 | 127,427 | 713 | 14,357 | 9,117 |
| 2016 | 13,501 | 31,422 | 34,381 | 10,626 | 24,004 | 113,934 | 713 | 11,667 | 7,655 |
| 2017 | 13,501 | 31,422 | 34,381 | 10,626 | 24,004 | 113,934 | 713 | 11,667 | 7,655 |
| 2018 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2019 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2020 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2021 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2022 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2023 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2024 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2025 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2026 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2027 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2028 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2029 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2030 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2031 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2032 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2033 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2034 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2035 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 20,944,852 | 38,884,341 | 24,556,452 | 6,255,652 | 49,260,126 | 139,901,423 | 948,460 | 13,595,979 | 11,419,721 |

TABLE B-10. Capital Costs of Each Aqueduct Reach to be Reimbursed through Capital Cost Component of Transportation Charge

| Calendar Year | (in dollars) | | | | | | | | | Sheet 4 of 8 |
|------------------|--|------------|------------|-----------|------------|-------------|-----------|-----------|-------------|--------------|
| | CALIFORNIA AQUEDUCT (continued) | | | | | | | | | |
| | SOUTH SAN JOAQUIN DIVISION (continued) | | | | | | | | | |
| | Reach 10A | Reach 11B | Reach 12D | Reach 12E | Reach 13B | Reach 14A | Reach 14B | Reach 14C | Reach 15A | |
| | [29] | [30] | [31] | [32] | [33] | [34] | [35] | [36] | [37] | |
| 1952 | 695 | 1,279 | 1,980 | 995 | 1,663 | 794 | 212 | 212 | 1,911 | |
| 1953 | 2,569 | 4,790 | 7,480 | 3,745 | 6,236 | 2,599 | 733 | 741 | 7,016 | |
| 1954 | 2,821 | 4,855 | 7,565 | 3,792 | 6,319 | 2,880 | 810 | 817 | 7,073 | |
| 1955 | 1,097 | 1,557 | 2,404 | 1,211 | 2,025 | 1,183 | 325 | 327 | 2,253 | |
| 1956 | 4,428 | 6,223 | 9,233 | 4,737 | 8,054 | 7,026 | 1,638 | 1,584 | 9,939 | |
| 1957 | 13,269 | 18,772 | 29,082 | 14,615 | 24,411 | 15,651 | 3,834 | 3,864 | 26,871 | |
| 1958 | 25,086 | 48,191 | 78,564 | 39,087 | 61,715 | 33,726 | 12,330 | 11,813 | 49,499 | |
| 1959 | 25,787 | 67,246 | 107,781 | 53,836 | 86,478 | 64,824 | 22,102 | 21,828 | 70,838 | |
| 1960 | 47,492 | 66,317 | 77,936 | 39,867 | 63,517 | 84,363 | 23,260 | 22,305 | 73,305 | |
| 1961 | 68,505 | 46,073 | 88,274 | 51,457 | 28,015 | 242,753 | 91,290 | 65,565 | 150,205 | |
| 1962 | 57,705 | 56,056 | 69,189 | 44,851 | 49,179 | 208,180 | 61,489 | 47,608 | 133,653 | |
| 1963 | 52,585 | 91,914 | 173,985 | 86,405 | 67,733 | 425,626 | 104,436 | 77,970 | 102,072 | |
| 1964 | 124,014 | 333,621 | 291,013 | 174,469 | 86,271 | 1,093,795 | 684,005 | 485,033 | 571,173 | |
| 1965 | 622,257 | 1,053,029 | 1,524,848 | 1,044,851 | 196,487 | 3,385,205 | 1,655,024 | 1,436,258 | 476,830 | |
| 1966 | 2,800,056 | 3,709,779 | 673,429 | 466,228 | 418,141 | 4,916,319 | 974,862 | 724,354 | 1,829,852 | |
| 1967 | 3,652,342 | 4,636,627 | 1,881,333 | 1,244,265 | 1,238,428 | 2,788,299 | 525,653 | 400,183 | 1,721,304 | |
| 1968 | 1,025,969 | 1,323,302 | 4,726,074 | 3,145,775 | 8,343,706 | 10,210,266 | 1,330,361 | 1,405,117 | 7,522,015 | |
| 1969 | 145,111 | 229,185 | 706,272 | 529,080 | 3,704,065 | 15,112,041 | 1,223,457 | 1,134,395 | 9,523,012 | |
| 1970 | 74,366 | 85,151 | 70,725 | 72,798 | 320,797 | 11,031,255 | 987,213 | 738,955 | 8,836,897 | |
| 1971 | 15,595 | 45,006 | 43,988 | 42,624 | 339,078 | 2,925,191 | 193,255 | 36,514 | 3,275,227 | |
| 1972 | 19,736 | 32,657 | 43,939 | 24,748 | 81,937 | 1,388,348 | 101,784 | 20,165 | 1,003,380 | |
| 1973 | 14,283 | 16,448 | 9,980 | 16,320 | 25,090 | 680,834 | 19,584 | 13,469 | 798,805 | |
| 1974 | 22,111 | 14,951 | 19,555 | 32,240 | 29,582 | 524,504 | 30,735 | 16,333 | 778,696 | |
| 1975 | 15,865 | 13,479 | 10,793 | 13,678 | 25,827 | 269,197 | 25,164 | 21,048 | 370,265 | |
| 1976 | 76,202 | 54,217 | 37,464 | 59,842 | 105,332 | 507,519 | 59,753 | 42,776 | 434,574 | |
| 1977 | 75,628 | 52,919 | 22,826 | 54,444 | 81,293 | 301,515 | 49,972 | 30,152 | 235,517 | |
| 1978 | 48,754 | 16,469 | (2,816) | 27,331 | 43,126 | 348,674 | (653) | 1,500 | 297,617 | |
| 1979 | 241 | 6,906 | 13,401 | 14,229 | 25,411 | 293,786 | 9,846 | 7,856 | 245,590 | |
| 1980 | 18,165 | 18,813 | 15,608 | 27,498 | 34,190 | 1,676,267 | 29,169 | 23,023 | 1,719,775 | |
| 1981 | 10,309 | 14,885 | 26,473 | 20,972 | 25,515 | (1,076,221) | 27,551 | 33,674 | (1,142,721) | |
| 1982 | 8,237 | 6,608 | 7,680 | 8,346 | 16,339 | (745,914) | 9,886 | 29,393 | (804,147) | |
| 1983 | 14,488 | 9,792 | 14,174 | 13,050 | 35,872 | 419,650 | 17,389 | 24,933 | 115,983 | |
| 1984 | 7,533 | 27,613 | 87,907 | 49,271 | 22,732 | 54,590 | 75,453 | 63,060 | 63,537 | |
| 1985 | 9,215 | 6,949 | 5,263 | 8,013 | 8,875 | (49,408) | 9,523 | 5,867 | 54,782 | |
| 1986 | 22,335 | 16,664 | 16,014 | 25,031 | 20,483 | 140,642 | 25,960 | 13,913 | 154,089 | |
| 1987 | 16,704 | 13,512 | 12,369 | 20,023 | 15,435 | 101,453 | 20,411 | 8,581 | 227,047 | |
| 1988 | (159,357) | (73,648) | (151,040) | (51,401) | (120,104) | 161,077 | (75,276) | (75,307) | 144,369 | |
| 1989 | 70,153 | 65,216 | 63,382 | 120,925 | 73,037 | 2,778,880 | 119,559 | 36,660 | 2,952,046 | |
| 1990 | 34,841 | 29,230 | 27,269 | 49,082 | 34,048 | 715,031 | 44,187 | 14,537 | 440,017 | |
| 1991 | 36,888 | 32,195 | 30,146 | 55,119 | 34,144 | 423,235 | 50,345 | 12,116 | 353,596 | |
| 1992 | 103,321 | 99,765 | 98,178 | 192,455 | 97,638 | 991,603 | 185,311 | 9,210 | 387,615 | |
| 1993 | 90,291 | 70,131 | 63,247 | 118,440 | 80,530 | 687,462 | 109,792 | 38,960 | 942,211 | |
| 1994 | 65,737 | 29,221 | 26,997 | 50,234 | 35,154 | 400,534 | 44,481 | 17,426 | 324,942 | |
| 1995 | 435,909 | 32,487 | 25,516 | 49,885 | 41,733 | 524,524 | 48,740 | 29,125 | 450,952 | |
| 1996 | 253,433 | 19,489 | 15,020 | 30,202 | 29,333 | 403,125 | 26,945 | 16,405 | 253,622 | |
| 1997 | 73,458 | 30,890 | 25,368 | 48,767 | 40,900 | 451,910 | 47,815 | 29,878 | 809,848 | |
| 1998 | 14,618 | 7,107 | 5,773 | 10,697 | 9,676 | 288,667 | 10,799 | 6,819 | 119,562 | |
| 1999 | 47,359 | 17,022 | 13,362 | 34,410 | 31,539 | 260,623 | 24,634 | 14,826 | 264,538 | |
| 2000 | 43,459 | 21,186 | 32,480 | 40,180 | 25,119 | 168,825 | 15,243 | 11,006 | 151,512 | |
| 2001 | 42,731 | 14,471 | 22,325 | 34,996 | 8,027 | 71,645 | 4,537 | 3,988 | 66,918 | |
| 2002 | 87,805 | 19,626 | 7,157 | 78,600 | 47,505 | 276,160 | 22,632 | 34,980 | 164,596 | |
| 2003 | 22,946 | 9,280 | 8,935 | 18,115 | 15,308 | 136,433 | 6,671 | 9,686 | 110,492 | |
| 2004 | 5,493 | 3,291 | 4,188 | 7,001 | 5,787 | 52,563 | 5,588 | 1,490 | 50,520 | |
| 2005 | 7,309 | 6,323 | 12,572 | 6,301 | 6,351 | 21,570 | 12,561 | 47 | 9,057 | |
| 2006 | 1,874 | 1,682 | 3,147 | 1,619 | 1,737 | 5,946 | 3,110 | 107 | 2,699 | |
| 2007 | 13,807 | 11,909 | 23,818 | 11,909 | 11,910 | 40,392 | 23,818 | 1 | 16,745 | |
| 2008 | 8,919 | 6,999 | 12,960 | 8,044 | 8,187 | 35,363 | 13,537 | 568 | 22,711 | |
| 2009 | 10,504 | 8,926 | 16,976 | 9,236 | 9,565 | 35,656 | 17,158 | 450 | 18,753 | |
| 2010 | 13,217 | 15,147 | 17,942 | 11,557 | 18,346 | 65,119 | 15,852 | 6,193 | 40,515 | |
| 2011 | 64,511 | 59,387 | 106,428 | 55,797 | 62,587 | 592,358 | 104,338 | 6,193 | 479,909 | |
| 2012 | 67,661 | 62,104 | 111,862 | 58,514 | 65,304 | 601,571 | 109,772 | 6,193 | 483,729 | |
| 2013 | 67,809 | 62,232 | 112,118 | 58,642 | 65,432 | 602,006 | 110,028 | 6,193 | 483,909 | |
| 2014 | 51,947 | 48,551 | 84,754 | 44,961 | 51,751 | 555,607 | 82,664 | 6,193 | 464,675 | |
| 2015 | 10,142 | 12,495 | 12,638 | 8,905 | 15,694 | 371,087 | 10,548 | 6,193 | 257,448 | |
| 2016 | 8,447 | 11,033 | 9,715 | 7,443 | 14,233 | 51,168 | 7,624 | 6,193 | 34,732 | |
| 2017 | 8,447 | 11,033 | 9,715 | 7,443 | 14,233 | 51,168 | 7,624 | 6,193 | 34,732 | |
| 2018 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2019 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2020 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2021 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2022 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2023 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2024 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2025 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2026 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2027 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2028 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2029 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2030 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2031 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2032 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2033 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2034 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2035 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| TOTAL | 10,745,234 | 12,896,635 | 11,764,733 | 8,657,802 | 16,484,061 | 69,208,720 | 9,618,453 | 7,233,708 | 49,280,900 | |

TABLE B-10. Capital Costs of Each Aqueduct Reach to be Reimbursed through Capital Cost Component of Transportation Charge

(in dollars)

Sheet 5 of 8

| Calendar Year | CALIFORNIA AQUEDUCT (continued) | | | | | | | | |
|---------------|---------------------------------|-------------|--------------------|------------|-------------|-----------------|------------|-----------|------------|
| | SOUTH SAN JOAQUIN (contd.) | | TEHACHAPI DIVISION | | | MOJAVE DIVISION | | | |
| | Reach 16A | Subtotal | Reach 17E | Reach 17F | Subtotal | Reach 18A | Reach 19 | Reach 19C | Reach 20A |
| | [38] | [39] | [40] | [41] | [42] | [43] | [44] | [45] | [46] |
| 1952 | 4,440 | 16,030 | 9,703 | 4,072 | 13,775 | 4,090 | 1,520 | 0 | 2,561 |
| 1953 | 16,513 | 59,323 | 31,337 | 13,284 | 44,621 | 12,610 | 4,685 | 0 | 7,246 |
| 1954 | 16,601 | 60,328 | 46,243 | 20,010 | 66,253 | 16,642 | 6,184 | 0 | 9,506 |
| 1955 | 5,223 | 19,612 | 25,880 | 11,362 | 37,242 | 5,612 | 2,086 | 0 | 2,529 |
| 1956 | 21,754 | 82,940 | 47,487 | 17,609 | 65,096 | 6,038 | 2,244 | 0 | 2,440 |
| 1957 | 62,657 | 237,073 | 119,673 | 49,130 | 168,803 | 22,348 | 8,304 | 0 | 9,035 |
| 1958 | 133,083 | 537,575 | 164,056 | 72,081 | 236,147 | 37,917 | 14,166 | 123 | 15,391 |
| 1959 | 205,748 | 773,179 | 151,389 | 57,883 | 209,272 | 38,620 | 23,450 | 1,102 | 23,605 |
| 1960 | 204,788 | 774,678 | 203,222 | 45,323 | 248,545 | 21,356 | 26,093 | 5,318 | 40,523 |
| 1961 | 206,305 | 1,148,969 | 387,819 | 85,558 | 473,377 | 35,664 | 32,281 | 2,262 | 34,918 |
| 1962 | 171,396 | 1,127,293 | 353,119 | 82,610 | 435,729 | 68,508 | 266,284 | 1,841 | 10,323 |
| 1963 | 481,941 | 1,913,123 | 1,191,633 | 124,757 | 1,316,390 | 37,379 | 435,881 | 4,137 | 39,706 |
| 1964 | 1,778,952 | 5,834,889 | 1,866,000 | 775,005 | 2,641,005 | 95,693 | 706,369 | 8,564 | 43,342 |
| 1965 | 1,268,176 | 13,733,092 | 2,574,824 | 2,284,869 | 4,859,693 | 121,060 | 716,092 | 9,156 | 108,519 |
| 1966 | 2,896,274 | 27,347,168 | 5,537,412 | 9,323,517 | 14,860,929 | 366,116 | 1,644,699 | 13,373 | 159,282 |
| 1967 | 3,442,021 | 30,089,234 | 26,239,390 | 12,398,708 | 38,638,098 | 1,312,022 | 903,880 | 24,103 | 645,078 |
| 1968 | 7,578,498 | 48,226,583 | 33,363,479 | 7,416,464 | 40,779,943 | 136,804 | 7,109,653 | 71,388 | 1,889,601 |
| 1969 | 13,136,056 | 45,702,910 | 40,368,425 | 6,883,206 | 47,251,631 | 213,805 | 2,465,641 | 7,423 | 5,939,151 |
| 1970 | 13,890,751 | 36,322,845 | 35,446,706 | 6,786,231 | 42,232,937 | 2,211,077 | 1,210,665 | 6,217 | 3,652,478 |
| 1971 | 7,903,937 | 14,885,415 | 20,141,395 | 6,835,303 | 26,976,698 | 1,496,843 | 284,738 | 6,994 | 1,074,759 |
| 1972 | 3,025,555 | 5,783,019 | 10,002,935 | 34,791 | 10,037,726 | 129,417 | 409,903 | 3,620 | 471,963 |
| 1973 | 1,472,313 | 3,096,609 | 3,090,140 | 36,207 | 3,126,347 | 23,931 | 75,638 | 2,539 | 88,416 |
| 1974 | 1,031,843 | 2,546,984 | 4,798,348 | 152,494 | 4,950,842 | 28,399 | 205,581 | 2,703 | 138,673 |
| 1975 | 489,545 | 1,289,211 | 2,144,178 | 411,404 | 2,555,582 | 44,774 | 70,652 | 5,066 | 68,157 |
| 1976 | 618,049 | 2,154,103 | 1,124,357 | 174,629 | 1,298,986 | 121,043 | 84,593 | 6,786 | 59,967 |
| 1977 | 580,209 | 1,673,525 | 655,047 | 31,512 | 686,559 | 261,400 | 133,767 | 7,521 | 117,878 |
| 1978 | 582,775 | 1,428,409 | 1,900,843 | 27,956 | 1,928,799 | 553,014 | 57,150 | 5,872 | 51,615 |
| 1979 | 542,554 | 1,182,702 | 2,099,385 | 61,381 | 2,160,766 | 626,615 | 339,536 | 10,831 | 37,085 |
| 1980 | 3,772,498 | 7,372,362 | 17,433,610 | 6,046 | 17,439,656 | 1,130,429 | 1,073,430 | 3,604 | 308,188 |
| 1981 | (2,527,211) | (4,566,440) | (3,848,206) | 6,908 | (3,841,298) | 1,218,824 | 845,702 | 4,498 | 48,625 |
| 1982 | (1,850,736) | (3,296,600) | 11,370,112 | 6,054 | 11,376,166 | 6,968,683 | 746,900 | 3,920 | 33,869 |
| 1983 | 166,232 | 864,390 | 8,862,914 | 8,269 | 8,871,183 | 10,909,386 | 64,660 | 2,596 | 40,793 |
| 1984 | 119,387 | 613,799 | 3,227,937 | 31,701 | 3,259,638 | 8,340,371 | 309,491 | 3,124 | 17,505 |
| 1985 | 82,117 | 165,866 | 1,926,289 | 10,460 | 1,936,749 | 5,264,156 | 227,986 | 3,885 | 68,422 |
| 1986 | 186,348 | 675,895 | 1,381,955 | 33,788 | 1,415,743 | 2,049,111 | 2,069,663 | 4,261 | 2,331,707 |
| 1987 | 194,936 | 718,184 | 671,183 | 13,807 | 684,990 | 1,347,722 | (6,453) | 4,684 | 562,540 |
| 1988 | 262,334 | (308,900) | 1,408,760 | (49,734) | 1,359,026 | 847,954 | (104,961) | 13,409 | (159,892) |
| 1989 | 5,955,356 | 12,610,055 | 504,715 | 64,660 | 569,375 | 376,980 | 207,150 | 50,953 | 31,173 |
| 1990 | 640,283 | 4,092,118 | 783,219 | 25,218 | 808,437 | 202,065 | (402,573) | 61,192 | (637,062) |
| 1991 | 774,129 | 1,890,989 | 691,578 | 33,405 | 724,983 | 273,021 | 22,218 | 81,545 | (188,732) |
| 1992 | 731,512 | 3,113,074 | 741,986 | 24,369 | 766,355 | 620,962 | 384,568 | 86,644 | 225,398 |
| 1993 | 857,038 | 3,265,681 | 1,223,402 | 35,370 | 1,258,772 | 1,131,166 | 248,287 | 72,746 | 110,869 |
| 1994 | 853,328 | 1,937,975 | 806,213 | 16,681 | 822,894 | 998,126 | 164,096 | 60,147 | 51,340 |
| 1995 | 628,941 | 2,373,574 | 1,538,497 | 19,443 | 1,557,940 | 390,433 | 157,481 | 45,990 | 92,925 |
| 1996 | 388,064 | 1,498,995 | 2,571,039 | 10,797 | 2,581,836 | 91,593 | 69,281 | 22,188 | 35,656 |
| 1997 | 481,458 | 2,144,699 | 1,009,249 | 18,265 | 1,027,514 | 135,402 | 92,607 | 13,590 | 65,433 |
| 1998 | 440,746 | 937,096 | 925,574 | 6,843 | 932,417 | 47,486 | 36,170 | 4,164 | 29,900 |
| 1999 | 361,516 | 1,124,224 | 662,144 | 12,166 | 674,310 | 113,232 | 49,150 | 5,329 | 171,935 |
| 2000 | 372,997 | 938,801 | 408,352 | 14,333 | 422,685 | 120,267 | 90,145 | 936 | 83,478 |
| 2001 | 167,694 | 477,838 | 266,815 | 10,891 | 277,706 | 65,580 | 186,973 | 2,223 | 343,775 |
| 2002 | 286,748 | 1,093,667 | 247,986 | 9,586 | 257,572 | 35,787 | (139,334) | 1,374 | (111,675) |
| 2003 | 159,978 | 535,483 | 189,022 | 12,339 | 201,361 | 84,434 | (19,049) | 0 | (11,367) |
| 2004 | 322,068 | 490,368 | 372,622 | 4,637 | 377,259 | 19,723 | 17,430 | 0 | 18,763 |
| 2005 | 43,850 | 170,145 | 2,264,414 | 6,561 | 2,270,975 | 26,984 | 18,894 | 0 | 25,122 |
| 2006 | 11,302 | 43,895 | 5,855,389 | 2,358 | 5,857,747 | 7,070 | 4,981 | 0 | 6,376 |
| 2007 | 82,675 | 284,165 | 3,829,554 | 11,915 | 3,841,469 | 49,382 | 35,729 | 0 | 47,637 |
| 2008 | 63,596 | 210,198 | 640,715 | 7,591 | 648,306 | 20,474 | 19,644 | 0 | 28,901 |
| 2009 | 67,633 | 222,291 | 9,987,899 | 10,348 | 9,998,247 | 23,685 | 25,891 | 0 | 33,870 |
| 2010 | 83,986 | 319,595 | 9,337,336 | 53,655 | 9,390,991 | 43,612 | 41,692 | 0 | 40,493 |
| 2011 | 768,316 | 2,457,218 | 7,439,825 | 97,896 | 7,537,721 | 285,897 | 174,419 | 0 | 217,465 |
| 2012 | 787,177 | 2,518,998 | 1,548,479 | 100,612 | 1,649,091 | 319,404 | 182,569 | 0 | 228,333 |
| 2013 | 788,066 | 2,521,910 | 1,034,702 | 100,740 | 1,135,442 | 165,082 | 182,953 | 0 | 228,845 |
| 2014 | 693,088 | 2,210,802 | 1,017,848 | 87,059 | 1,104,907 | 129,788 | 141,908 | 0 | 174,117 |
| 2015 | 442,776 | 1,172,113 | 958,343 | 51,003 | 1,009,346 | 36,771 | 33,736 | 0 | 29,885 |
| 2016 | 181,791 | 352,414 | 217,230 | 49,541 | 266,771 | 33,000 | 29,351 | 0 | 24,038 |
| 2017 | 55,429 | 226,052 | 217,230 | 49,541 | 266,771 | 33,000 | 29,351 | 0 | 24,038 |
| 2018 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2019 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2020 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2021 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2022 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2023 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2024 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2025 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2026 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2027 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2028 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2029 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2030 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2031 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2032 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2033 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2034 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2035 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 79,665,403 | 301,519,810 | 293,810,356 | 55,232,488 | 349,042,844 | 52,005,839 | 24,553,871 | 759,941 | 19,416,433 |

TABLE B-10. Capital Costs of Each Aqueduct Reach to be Reimbursed through Capital Cost Component of Transportation Charge

(in dollars)

Sheet 6 of 8

| Calendar Year | CALIFORNIA AQUEDUCT (continued) | | | | | | | | |
|------------------|---------------------------------|-------------|------------|-------------|------------|------------|-------------|--------------------|-------------|
| | MOJAVE DIVISION (continued) | | | | | | | SANTA ANA DIVISION | |
| | Reach 20B | Reach 21 | Reach 22A | Reach 22B | Reach 23 | Reach 24 | Subtotal | Reach 25 | Reach 26A |
| | [47] | [48] | [49] | [50] | [51] | [52] | [53] | [54] | [55] |
| 1952 | 892 | 5,788 | 35 | 2,013 | 2,074 | 2,413 | 21,386 | 3,334 | 5,599 |
| 1953 | 3,402 | 17,846 | 71 | 5,752 | 6,886 | 7,438 | 65,936 | 10,275 | 17,264 |
| 1954 | 4,548 | 23,558 | 369 | 8,560 | 7,849 | 9,820 | 87,036 | 13,566 | 22,790 |
| 1955 | 2,213 | 7,947 | 178 | 2,754 | 2,725 | 3,313 | 29,357 | 4,575 | 7,687 |
| 1956 | 2,655 | 8,542 | 216 | 2,905 | 2,961 | 3,561 | 31,562 | 4,917 | 8,264 |
| 1957 | 9,826 | 31,616 | 800 | 10,757 | 10,962 | 13,177 | 116,825 | 18,205 | 30,586 |
| 1958 | 16,752 | 53,569 | 1,387 | 18,717 | 18,578 | 22,627 | 185,237 | 31,001 | 52,019 |
| 1959 | 18,604 | 56,724 | 1,844 | 25,421 | 20,372 | 45,646 | 255,388 | 39,325 | 58,137 |
| 1960 | 37,179 | 43,893 | 11,029 | 136,751 | 17,152 | 109,816 | 449,110 | 65,655 | 93,700 |
| 1961 | 37,102 | 21,532 | 14,517 | 215,859 | 9,546 | 373,473 | 777,154 | 26,979 | 56,734 |
| 1962 | 10,730 | 8,197 | 4,186 | 164,168 | 4,336 | 279,421 | 817,994 | 9,964 | 36,235 |
| 1963 | 40,865 | 26,670 | 17,081 | 237,695 | 7,228 | 358,503 | 1,205,145 | 31,013 | 112,271 |
| 1964 | 71,116 | 33,912 | 22,793 | 262,996 | 6,863 | 244,003 | 1,495,651 | 69,669 | 202,642 |
| 1965 | 343,506 | 91,095 | 65,689 | 827,655 | 11,836 | 621,566 | 2,916,174 | 279,237 | 206,356 |
| 1966 | 1,311,628 | 160,388 | 178,538 | 1,746,245 | 31,078 | 1,018,628 | 6,629,975 | 415,066 | 364,004 |
| 1967 | 1,718,942 | 498,257 | 367,961 | 3,146,128 | 62,135 | 2,331,106 | 11,009,612 | 3,184,296 | 638,539 |
| 1968 | 2,291,691 | 1,141,929 | 1,145,768 | 4,588,850 | 102,207 | 2,600,293 | 21,078,184 | 8,264,126 | 1,268,194 |
| 1969 | 5,626,284 | 2,358,737 | 1,515,147 | 7,750,478 | 260,659 | 11,131,406 | 37,268,731 | 6,807,783 | 1,768,456 |
| 1970 | 5,304,372 | 3,232,911 | 2,081,810 | 23,451,612 | 1,240,798 | 16,885,193 | 59,277,133 | 2,169,051 | 7,229,429 |
| 1971 | 1,091,123 | 825,070 | 432,464 | 16,772,680 | 1,922,115 | 5,385,721 | 29,292,507 | 1,135,248 | 9,811,736 |
| 1972 | 635,507 | 484,772 | 324,865 | 3,788,894 | 48,049 | 788,479 | 7,085,469 | 1,095,740 | 5,528,987 |
| 1973 | 83,840 | 63,774 | 36,179 | 1,623,274 | 24,333 | 4,225,877 | 6,247,801 | 136,994 | 1,810,729 |
| 1974 | 118,639 | 103,545 | 54,198 | 5,699,605 | 130,567 | 766,562 | 7,248,472 | 68,180 | 1,922,999 |
| 1975 | 169,294 | 167,240 | 19,453 | 4,793,580 | 19,467 | 373,783 | 5,731,466 | 166,653 | 3,787,797 |
| 1976 | 102,909 | 44,896 | 24,732 | 3,103,916 | 84,188 | 204,705 | 3,837,735 | 475,176 | 1,494,750 |
| 1977 | 120,160 | 71,389 | 49,445 | 1,654,122 | 60,112 | 232,230 | 2,708,024 | 76,255 | 776,085 |
| 1978 | 68,838 | 32,855 | 18,183 | 677,448 | 36,484 | 210,198 | 1,711,657 | 57,463 | 131,076 |
| 1979 | 36,225 | 18,948 | 10,675 | 560,506 | 10,634 | 103,615 | 1,754,670 | 29,960 | 80,482 |
| 1980 | 284,545 | 133,526 | 121,171 | 2,239,224 | 60,229 | 559,963 | 5,914,309 | 31,462 | 181,638 |
| 1981 | 32,214 | 13,223 | 6,466 | (774,614) | 138,917 | 203,941 | 1,737,796 | 5,864 | 69,031 |
| 1982 | 77,988 | 13,158 | 14,459 | 432,274 | 346,905 | 79,819 | 8,717,975 | 9,224 | 159,280 |
| 1983 | 58,714 | 25,900 | 10,363 | 451,428 | 2,029,405 | 58,989 | 13,652,234 | 4,304 | 528,764 |
| 1984 | 35,378 | 845,423 | 6,052 | (83,811) | 1,290,740 | 34,764 | 10,799,037 | 3,850 | 270,455 |
| 1985 | (232,549) | (481,017) | 1,945,477 | 608,583 | 966,160 | 51,634 | 8,422,737 | 5,555 | 62,571 |
| 1986 | (2,046,222) | (1,334,975) | 3,260,280 | 1,097,122 | 230,510 | 51,994 | 7,713,451 | 9,927 | 114,561 |
| 1987 | (344,829) | 55,519 | 64,264 | 3,631,282 | 146,850 | 91,223 | 5,552,802 | 4,908 | 27,208 |
| 1988 | (147,290) | (70,564) | 351,489 | 552,546 | 558,557 | 197,761 | 2,039,009 | 7,358 | 161,957 |
| 1989 | 60,657 | 30,217 | 534,658 | 4,161,037 | 1,496,776 | 433,072 | 7,382,673 | 8,092 | (2,297,399) |
| 1990 | (403,413) | (635,623) | (97,841) | 8,794,258 | 1,394,698 | 344,367 | 8,620,068 | 176,854 | (1,657,576) |
| 1991 | (18,809) | (147,369) | (17,234) | 7,985,326 | 3,624,824 | 139,105 | 11,753,895 | 202,286 | (1,316,160) |
| 1992 | 338,098 | (263,897) | 75,210 | 4,849,560 | 8,364,426 | 127,829 | 14,808,798 | 333,934 | (1,878,502) |
| 1993 | 180,598 | 133,941 | 49,144 | 2,094,764 | 15,390,366 | 159,211 | 19,571,092 | 1,506,787 | 3,979,221 |
| 1994 | 114,273 | 65,260 | 26,546 | 933,021 | 8,082,401 | 81,869 | 10,577,079 | 2,104,588 | 2,493,097 |
| 1995 | 121,499 | 66,503 | 30,918 | 1,096,953 | 5,924,175 | 123,653 | 8,050,530 | 3,310,564 | 500,791 |
| 1996 | 48,699 | 44,953 | 17,787 | 1,736,686 | 2,181,669 | 96,339 | 4,344,851 | 19,019,751 | (100,474) |
| 1997 | 39,973 | 55,881 | 27,865 | 809,666 | (342,563) | 102,390 | 1,000,244 | 7,645,602 | (662,524) |
| 1998 | 27,626 | 20,285 | 12,816 | 273,139 | 3,392,776 | 36,135 | 3,880,497 | 993,619 | 1,613,505 |
| 1999 | 58,392 | 37,680 | 17,874 | 1,006,721 | 2,208,657 | 123,472 | 3,792,422 | 224,119 | 843,638 |
| 2000 | 75,230 | 44,857 | 20,181 | 724,837 | 1,251,684 | 83,871 | 2,495,486 | 129,156 | 1,285,637 |
| 2001 | 121,907 | 77,799 | 54,526 | 550,843 | 342,965 | 26,780 | 1,773,371 | 73,031 | 447,282 |
| 2002 | (82,663) | (7,369) | (43,431) | 270,386 | 269,139 | 71,793 | 264,007 | 54,815 | 1,753,554 |
| 2003 | (7,564) | (3,238) | (3,009) | 382,025 | 146,659 | 30,255 | 599,146 | 86,731 | 350,997 |
| 2004 | 12,619 | 13,744 | 5,414 | 262,810 | 48,570 | 12,285 | 411,358 | 13,577 | 275,709 |
| 2005 | 18,863 | 25,068 | 6,373 | 63,039 | 104,794 | 144,227 | 433,364 | 16,919 | 120,247 |
| 2006 | 4,514 | 5,984 | 1,492 | 15,148 | 294,327 | 577,842 | 917,734 | 21,941 | 16,671 |
| 2007 | 35,725 | 47,634 | 11,908 | 151,063 | 919,040 | 69,935 | 1,368,053 | 12,905 | 55,918 |
| 2008 | 19,526 | 25,456 | 6,313 | 346,638 | 3,113,899 | 2,019,852 | 5,600,703 | 2,481 | 82,555 |
| 2009 | 24,745 | 32,909 | 8,241 | 940,452 | 448,164 | 1,834,401 | 3,372,358 | 2,972 | 260,999 |
| 2010 | 15,162 | 18,249 | 4,904 | 1,650,770 | 10,907 | 607,986 | 2,433,775 | 2,738 | 1,040,393 |
| 2011 | 147,888 | 195,221 | 49,144 | 8,323,862 | 360,018 | 4,466 | 9,758,380 | 2,738 | 1,786,594 |
| 2012 | 156,039 | 206,089 | 51,861 | 6,738,344 | 366,554 | 4,466 | 8,253,659 | 2,738 | 1,304,277 |
| 2013 | 156,423 | 206,601 | 51,989 | 902,447 | 154,664 | 4,466 | 2,053,470 | 2,738 | 244,003 |
| 2014 | 115,378 | 151,874 | 38,308 | 766,422 | 85,465 | 4,466 | 1,607,726 | 2,738 | 179,758 |
| 2015 | 7,206 | 7,641 | 2,252 | 313,634 | 4,988 | 4,466 | 440,579 | 2,738 | 10,443 |
| 2016 | 2,821 | 1,794 | 790 | 16,201 | 1,726 | 4,466 | 114,187 | 2,738 | 3,579 |
| 2017 | 2,821 | 1,794 | 790 | 16,201 | 1,726 | 4,466 | 114,187 | 2,738 | 3,579 |
| 2018 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2019 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2020 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2021 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2022 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2023 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2024 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2025 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2026 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2027 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2028 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2029 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2030 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2031 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2032 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2033 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2034 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2035 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 18,391,024 | 9,295,711 | 13,125,433 | 145,609,628 | 69,573,961 | 56,960,592 | 409,692,433 | 60,734,786 | 49,838,824 |

TABLE B-10. Capital Costs of Each Aqueduct Reach to be Reimbursed through Capital Cost Component of Transportation Charge

(in dollars)

Sheet 7 of 8

| Calendar Year | CALIFORNIA AQUEDUCT (continued) | | | | | | | | | |
|---------------|---------------------------------|------------|-------------|-------------|--|-------------|------------|-------------|------------|--------------|
| | SANTA ANA DIVISION (continued) | | | | | WEST BRANCH | | | | |
| | Reach 28G (a) | Reach 28H | Reach 28J | Subtotal | | Reach 29A | Reach 29F | Reach 29G | Reach 29H | Reach 29J |
| | [56] | [57] | [58] | [59] | | [60] | [61] | [62] | [63] | [64] |
| 1952 | 4,785 | 4,055 | 3,020 | 20,793 | | 2,924 | 136 | 175 | 459 | 553 |
| 1953 | 15,580 | 11,511 | 9,476 | 64,106 | | 9,093 | 344 | 237 | 1,754 | 1,683 |
| 1954 | 18,015 | 18,100 | 12,160 | 84,631 | | 7,389 | 1,201 | 2,229 | 2,350 | 4,162 |
| 1955 | 6,052 | 6,081 | 4,151 | 28,546 | | 1,019 | 585 | 1,086 | 1,147 | 2,029 |
| 1956 | 6,496 | 6,525 | 4,480 | 30,682 | | 490 | 698 | 1,297 | 1,366 | 2,420 |
| 1957 | 24,044 | 24,156 | 16,595 | 113,576 | | 1,809 | 2,583 | 4,792 | 5,057 | 8,952 |
| 1958 | 40,844 | 41,033 | 28,470 | 193,367 | | 3,256 | 4,516 | 8,714 | 8,878 | 15,847 |
| 1959 | 45,746 | 45,946 | 44,331 | 233,485 | | 7,953 | 9,150 | 19,414 | 18,243 | 35,583 |
| 1960 | 59,102 | 58,548 | 118,969 | 395,974 | | 21,753 | 14,990 | 34,447 | 29,764 | 69,752 |
| 1961 | 32,226 | 34,382 | 674,787 | 825,108 | | 22,442 | 12,775 | 21,559 | 20,086 | 39,761 |
| 1962 | 21,383 | 20,530 | 47,484 | 135,596 | | 40,237 | 28,729 | 86,938 | 58,215 | 108,962 |
| 1963 | 43,884 | 41,698 | 1,506,440 | 1,735,306 | | 91,959 | 69,162 | 163,347 | 110,015 | 211,592 |
| 1964 | 89,710 | 45,762 | 98,569 | 506,352 | | 150,670 | 66,420 | 207,977 | 143,340 | 291,404 |
| 1965 | 96,956 | 76,899 | 146,095 | 805,543 | | 361,811 | 77,914 | 403,115 | 127,430 | 589,638 |
| 1966 | 170,878 | 308,756 | 589,107 | 1,847,811 | | 489,512 | 203,497 | 1,233,640 | 348,918 | 3,231,797 |
| 1967 | 233,968 | 283,126 | 987,832 | 5,327,761 | | 1,589,715 | 882,096 | 1,117,243 | 891,607 | 31,088,491 |
| 1968 | 871,337 | 266,295 | 780,587 | 11,450,539 | | 3,899,363 | 300,921 | 396,190 | 1,104,832 | 36,157,768 |
| 1969 | 1,117,873 | 1,444,654 | 756,442 | 11,895,208 | | 6,592,580 | 336,480 | 693,348 | 1,184,454 | 9,655,871 |
| 1970 | 1,843,621 | 1,013,468 | 2,829,523 | 15,085,092 | | 7,986,733 | 6,089,401 | 2,624,747 | 3,002,968 | 8,463,475 |
| 1971 | 16,095,702 | 6,401,303 | 12,111,623 | 45,555,612 | | 4,247,037 | 3,768,699 | 1,120,231 | 8,244,651 | 5,844,024 |
| 1972 | 1,537,880 | 11,960,791 | 21,542,747 | 41,666,145 | | 1,871,831 | 426,932 | 985,512 | 18,787,722 | (23,015,734) |
| 1973 | 209,664 | 247,769 | 3,673,344 | 6,078,500 | | 168,064 | 399,856 | 940,876 | 9,408,706 | 1,821,206 |
| 1974 | 162,178 | 101,638 | 1,980,991 | 4,235,986 | | 560,657 | 168,878 | 169,717 | 3,901,261 | (3,454,239) |
| 1975 | 157,365 | 124,399 | 1,626,274 | 5,862,488 | | 353,670 | 421,176 | 925,693 | 664,113 | 609,891 |
| 1976 | 178,287 | 118,748 | 1,497,465 | 3,764,426 | | 396,809 | 650,417 | 1,274,484 | 706,244 | 650,209 |
| 1977 | 127,106 | 89,036 | 323,091 | 1,391,573 | | 390,637 | 3,018,637 | 2,152,961 | 196,012 | 1,135,148 |
| 1978 | 147,112 | 153,867 | 347,482 | 837,000 | | 1,427,190 | 2,219,135 | 6,694,615 | 57,817 | 149,932 |
| 1979 | 29,723 | 19,225 | 225,947 | 385,337 | | 940,013 | 2,168,382 | 19,813,742 | 597,858 | 331,313 |
| 1980 | 137,833 | 154,821 | 1,077,900 | 1,583,654 | | 1,276,793 | 4,108,143 | 24,537,814 | 550,337 | 204,751 |
| 1981 | 28,815 | 22,654 | 61,349 | 187,713 | | (711,751) | 2,699,873 | 19,806,531 | 94,944 | 28,852 |
| 1982 | 16,069 | 58,900 | 55,841 | 299,314 | | (465,217) | 351,251 | 17,964,617 | 215,678 | 42,587 |
| 1983 | 18,213 | 89,581 | (264,804) | 376,058 | | 100,394 | 180,971 | 6,751,649 | 220,029 | 24,295 |
| 1984 | 14,462 | 12,259 | 49,547 | 350,573 | | 71,759 | 68,930 | 2,870,259 | 335,942 | 17,285 |
| 1985 | 17,816 | 11,481 | 54,070 | 151,493 | | 142,244 | 25,386 | 2,126,670 | 102,366 | 21,971 |
| 1986 | 31,564 | 25,037 | 86,794 | 267,883 | | 133,914 | 62,294 | 274,660 | 141,894 | 36,149 |
| 1987 | 17,141 | 8,005 | 45,528 | 102,790 | | 13,936 | 453,949 | 711,773 | 192,511 | 27,931 |
| 1988 | 41,892 | 21,113 | 90,784 | 323,104 | | 427,544 | 118,010 | 1,660,959 | 203,130 | 95,930 |
| 1989 | 28,708 | 12,619 | 51,556 | (2,196,424) | | 207,067 | 430,662 | 584,186 | 241,811 | 97,472 |
| 1990 | 27,478 | 12,817 | 55,408 | (1,385,019) | | 197,428 | 355,480 | 386,882 | 813,211 | 54,269 |
| 1991 | 142,139 | 15,524 | 62,794 | (893,417) | | 219,321 | 344,386 | 453,336 | 1,132,520 | 55,176 |
| 1992 | 34,185 | 13,422 | 69,479 | (1,427,482) | | 541,026 | 295,312 | 464,421 | 4,402,524 | 47,182 |
| 1993 | 44,300 | 27,047 | 162,854 | 5,720,209 | | 464,987 | 320,182 | 643,189 | 3,361,457 | 74,198 |
| 1994 | 16,351 | 11,673 | 54,581 | 4,680,290 | | 203,666 | 231,527 | 362,717 | 306,148 | 33,758 |
| 1995 | 35,402 | 28,202 | 164,254 | 4,039,213 | | 344,358 | 392,647 | 536,253 | 468,656 | 34,007 |
| 1996 | 76,723 | 73,629 | 344,747 | 19,414,376 | | 150,901 | 161,394 | 427,223 | 203,201 | 15,357 |
| 1997 | 50,662 | 20,720 | 268,293 | 7,322,753 | | 298,002 | 71,310 | 432,940 | 276,180 | 50,095 |
| 1998 | 10,268 | 8,970 | 479,138 | 3,105,500 | | 346,973 | 21,003 | 2,028,979 | 181,951 | 49,377 |
| 1999 | 84,683 | 45,293 | 324,223 | 1,521,956 | | 296,520 | 37,641 | 1,080,682 | 125,373 | 51,213 |
| 2000 | 64,095 | 41,331 | 114,224 | 1,634,443 | | 212,174 | 33,747 | 238,676 | 116,588 | 13,241 |
| 2001 | 20,193 | 13,635 | 88,656 | 642,797 | | 43,281 | 6,448 | 104,127 | 110,850 | 10,737 |
| 2002 | 53,787 | 12,619 | 196,949 | 2,071,724 | | 171,190 | 30,767 | 252,912 | 60,146 | 7,881 |
| 2003 | 1,096,665 | 2,482,179 | 179,466 | 4,196,038 | | 50,519 | 9,141 | 103,160 | 57,712 | 51,000 |
| 2004 | 1,736,308 | 856,587 | 24,559 | 2,906,740 | | 47,768 | 6,780 | 27,718 | 107,695 | 215,925 |
| 2005 | 2,049,633 | 410,004 | 270,861 | 2,867,664 | | 273,455 | 12,746 | 54,353 | 6,596 | 52,365 |
| 2006 | 2,302,264 | 406,074 | 2,571,781 | 5,318,731 | | 660,670 | 3,073 | 115,837 | 1,566 | 2,299,575 |
| 2007 | (246) | 1,099,958 | 3,664,358 | 4,832,893 | | 107,460 | 25,257 | 1,958,512 | 269,569 | 347 |
| 2008 | 835,530 | 899,508 | 682,829 | 2,502,903 | | 2,090,139 | 14,503 | 103,704 | 1,001,788 | 2,089 |
| 2009 | 4,202,648 | 976,867 | 2,819,145 | 8,262,631 | | 1,931,429 | 17,722 | 22,988 | 1,463,563 | 631 |
| 2010 | 3,159,342 | 1,652,343 | 43,383,772 | 49,238,588 | | 564,432 | 10,841 | 18,538 | 10,487 | 9,860 |
| 2011 | 6,893 | 2,093 | 95,154,472 | 96,952,790 | | 338,299 | 534,993 | 367,649 | 52,842 | 9,860 |
| 2012 | 6,893 | 2,093 | 88,647,772 | 89,963,773 | | 341,269 | 977,036 | 414,734 | 55,559 | 9,860 |
| 2013 | 6,893 | 2,093 | 19,337,272 | 19,592,999 | | 341,426 | 105,017 | 123,632 | 55,687 | 9,860 |
| 2014 | 6,893 | 2,093 | 8,398,472 | 8,589,954 | | 324,571 | 77,653 | 93,096 | 42,006 | 9,860 |
| 2015 | 6,893 | 2,093 | 4,965,952 | 4,988,119 | | 223,570 | 5,537 | 12,619 | 5,950 | 9,860 |
| 2016 | 6,893 | 2,093 | 2,635,799 | 2,651,102 | | 2,994 | 2,613 | 9,357 | 4,488 | 9,860 |
| 2017 | 6,893 | 2,093 | 5,772 | 21,075 | | 2,994 | 2,613 | 9,357 | 4,488 | 9,860 |
| 2018 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 |
| 2019 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 |
| 2020 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 |
| 2021 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 |
| 2022 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 |
| 2023 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 |
| 2024 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 |
| 2025 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 |
| 2026 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 |
| 2027 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 |
| 2028 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 |
| 2029 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 |
| 2030 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 |
| 2031 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 |
| 2032 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 |
| 2033 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 |
| 2034 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 |
| 2035 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 39,830,691 | 32,507,824 | 328,423,919 | 511,336,044 | | 44,231,881 | 33,718,756 | 128,694,015 | 66,622,710 | 77,846,016 |

(a) Includes excess capacity costs (not shown in Table B-9) allocated to MWDSC in the following years and repaid under Article 24(c) of its contract: 1970 - \$362,000; 1971 - \$6,198,000; 1972 - \$139,000.

TABLE B-10. Capital Costs of Each Aqueduct Reach to be Reimbursed through Capital Cost Component of Transportation Charge

(in dollars)

Sheet 8 of 8

| Calendar Year | CALIFORNIA AQUEDUCT (continued) | | | | | | | | | | | GRAND TOTAL |
|------------------|---------------------------------|------------|----------------|------------|------------|------------|------------|-----------|-----------|-------------|-------------|----------------|
| | WEST BRANCH (cont.) | | COASTAL BRANCH | | | | | | | | Total | |
| | Reach 30 | Subtotal | Reach 31A | Reach 33A | Reach 33B | Reach 34 | Reach 35 | Reach 37 | Reach 38 | Subtotal | | |
| | [65] | [66] | [67] | [68] | [69] | [70] | [71] | [72] | [73] | [74] | [75] | [76] |
| 1952 | 1,408 | 5,655 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 98,857 | 99,353 |
| 1953 | 4,346 | 17,457 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 309,387 | 311,812 |
| 1954 | 5,743 | 23,074 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 394,688 | 402,143 |
| 1955 | 1,943 | 7,809 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 159,842 | 169,342 |
| 1956 | 2,077 | 8,348 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 255,679 | 351,551 |
| 1957 | 7,684 | 30,877 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 708,753 | 1,464,452 |
| 1958 | 13,931 | 55,142 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,331,616 | 2,286,623 |
| 1959 | 44,384 | 134,727 | 28,046 | 49,114 | 0 | 7,441 | 8,236 | 0 | 0 | 92,837 | 2,096,392 | 2,967,412 |
| 1960 | 84,703 | 255,409 | 34,404 | 70,450 | 0 | 8,507 | 14,265 | 0 | 0 | 127,626 | 2,937,049 | 4,660,833 |
| 1961 | 123,330 | 239,953 | 13,801 | 17,868 | 0 | 1,501 | 3,931 | 0 | 0 | 37,101 | 4,650,264 | 8,545,244 |
| 1962 | 348,366 | 671,447 | 10,121 | 7,798 | 0 | 524 | 1,689 | 0 | 0 | 20,132 | 5,827,774 | 8,875,171 |
| 1963 | 521,491 | 1,167,566 | 20,470 | 14,299 | 0 | 880 | 2,943 | 0 | 0 | 38,592 | 18,981,487 | 24,610,278 |
| 1964 | 1,372,464 | 2,232,275 | 315,418 | 26,963 | 0 | 1,687 | 5,639 | 0 | 0 | 349,707 | 31,550,813 | 41,736,060 |
| 1965 | 3,383,950 | 4,943,858 | 747,023 | 36,178 | 0 | 2,118 | 7,060 | 0 | 0 | 792,379 | 57,936,405 | 62,664,743 |
| 1966 | 9,364,753 | 14,872,117 | 2,258,915 | 35,864 | 0 | 1,736 | 5,764 | 0 | 0 | 2,302,279 | 124,748,128 | 129,110,330 |
| 1967 | 17,618,799 | 53,187,979 | 6,310,419 | 38,331 | 0 | 1,891 | 6,213 | 0 | 0 | 6,356,854 | 187,465,580 | 194,146,365 |
| 1968 | 15,736,691 | 57,595,765 | 2,707,580 | 30,784 | 0 | 1,324 | 4,369 | 0 | 0 | 2,744,057 | 192,593,079 | 197,978,911 |
| 1969 | 16,228,175 | 34,690,908 | 423,797 | 26,549 | 0 | 907 | 2,905 | 0 | 0 | 454,158 | 182,530,023 | 184,473,490 |
| 1970 | 22,330,328 | 50,497,652 | 269,194 | 24,368 | 0 | 851 | 2,787 | 0 | 0 | 297,200 | 206,720,774 | 207,082,650 |
| 1971 | 16,890,503 | 40,115,145 | 164,446 | 32,230 | 0 | 1,315 | 3,804 | 0 | 0 | 201,795 | 158,414,033 | 158,624,739 |
| 1972 | 3,818,001 | 2,874,264 | 131,332 | 17,601 | 0 | 522 | 1,660 | 0 | 0 | 151,115 | 68,228,670 | 68,362,291 |
| 1973 | 13,426,222 | 25,999,878 | 182,493 | 16,154 | 0 | 542 | 1,758 | 0 | 0 | 200,947 | 45,110,823 | 45,263,853 |
| 1974 | 2,988,318 | 4,334,592 | 190,866 | 18,799 | 0 | 463 | 1,405 | 0 | 0 | 211,533 | 24,036,199 | 24,402,166 |
| 1975 | 1,808,235 | 4,782,778 | 64,582 | 36,012 | 0 | 2,255 | 6,656 | 0 | 0 | 109,505 | 21,065,768 | 21,318,838 |
| 1976 | 1,253,067 | 4,931,230 | 198,266 | 68,898 | 0 | 5,088 | 14,988 | 0 | 0 | 287,240 | 17,183,961 | 17,492,910 |
| 1977 | 345,023 | 7,238,418 | 918,473 | 81,305 | 0 | 1,834 | 5,387 | 0 | 0 | 1,006,999 | 15,165,801 | 15,544,382 |
| 1978 | 763,445 | 11,312,134 | 52,994 | 83,300 | 0 | 1,302 | 3,852 | 0 | 0 | 141,448 | 18,661,117 | 19,119,151 |
| 1979 | 282,145 | 24,133,453 | 38,182 | 108,951 | 0 | 1,505 | 4,433 | 0 | 0 | 153,071 | 31,202,118 | 31,857,362 |
| 1980 | 2,055,206 | 32,733,044 | 189,070 | 376,036 | 0 | 1,152 | 3,449 | 0 | 0 | 569,707 | 73,891,101 | 74,986,833 |
| 1981 | 275,460 | 22,193,909 | 19,897 | (157,537) | 0 | 1,427 | 4,261 | 0 | 0 | (131,952) | 15,246,649 | 15,742,773 |
| 1982 | 351,376 | 18,460,292 | (16,381) | (96,449) | 0 | 588 | 1,787 | 0 | 0 | (110,455) | 38,256,580 | 39,705,931 |
| 1983 | 566,545 | 7,843,883 | 85,496 | 67,106 | 0 | 794 | 2,398 | 0 | 0 | 155,794 | 34,705,281 | 38,044,649 |
| 1984 | 1,118,954 | 4,483,129 | 28,568 | 54,074 | 0 | 986 | 2,959 | 0 | 0 | 86,587 | 24,454,091 | 30,382,250 |
| 1985 | 284,243 | 2,702,880 | 36,834 | 54,314 | 0 | 2,111 | 6,263 | 0 | 0 | 99,522 | 14,914,930 | 28,537,556 |
| 1986 | 213,353 | 862,264 | 82,358 | 223,134 | 0 | 17,458 | 51,279 | 0 | 0 | 374,229 | 13,435,351 | 43,155,828 |
| 1987 | 158,313 | 1,558,413 | 53,817 | 1,061,939 | 0 | 92,506 | 272,968 | 0 | 0 | 1,481,230 | 11,711,428 | 34,331,982 |
| 1988 | 222,068 | 2,727,641 | 183,853 | 1,141,272 | 0 | 99,456 | 293,612 | 0 | 0 | 1,718,193 | 11,026,370 | 18,123,243 |
| 1989 | 148,674 | 1,709,872 | 84,678 | 893,765 | 0 | 77,283 | 228,038 | 0 | 0 | 1,283,764 | 30,302,112 | 33,130,497 |
| 1990 | 119,438 | 1,926,708 | 133,868 | 1,100,167 | 0 | 103,785 | 277,889 | 0 | 0 | 1,615,709 | 32,589,619 | 34,435,721 |
| 1991 | 229,315 | 2,434,054 | 164,610 | 1,635,283 | 0 | 123,603 | 363,889 | 0 | 0 | 2,287,385 | 38,320,942 | 39,811,664 |
| 1992 | 206,495 | 5,956,960 | 183,240 | 1,220,510 | 1,495,646 | 566,230 | 240,553 | 102,051 | 74,162 | 3,882,392 | 34,312,996 | 35,041,233 |
| 1993 | 296,349 | 5,160,362 | 344,928 | 5,274,657 | 5,052,431 | 1,345,211 | 688,935 | 268,937 | 358,367 | 13,333,467 | 53,122,385 | 53,921,788 |
| 1994 | 168,426 | 1,306,242 | 282,150 | 15,905,886 | 21,341,196 | 8,915,445 | 2,363,238 | 678,753 | 1,315,559 | 50,802,227 | 73,751,564 | 74,225,377 |
| 1995 | 304,983 | 2,080,904 | 1,196,326 | 45,172,271 | 62,947,362 | 23,975,738 | 20,849,939 | 7,029,108 | 7,117,197 | 168,287,940 | 191,033,089 | 191,525,570 |
| 1996 | 98,522 | 1,056,598 | 948,730 | 42,987,442 | 54,300,990 | 26,475,298 | 18,790,572 | 7,213,823 | 6,616,310 | 157,333,164 | 187,776,346 | 188,025,324 |
| 1997 | 233,956 | 1,362,483 | 562,583 | 11,209,633 | 13,893,576 | 10,456,863 | 4,149,105 | 545,378 | 798,606 | 41,615,744 | 62,137,369 | 62,583,537 |
| 1998 | 67,874 | 2,696,157 | 248,671 | 2,355,322 | 4,159,441 | 3,368,320 | 952,615 | 192,567 | 280,779 | 11,557,715 | 27,083,446 | 27,217,157 |
| 1999 | 118,013 | 1,709,442 | 288,236 | 2,906,010 | 4,398,935 | 2,616,574 | 356,318 | 36,680 | 51,648 | 10,654,401 | 24,085,444 | 24,556,054 |
| 2000 | 187,926 | 802,352 | 132,435 | 228,901 | 2,965,936 | 2,746,120 | 17,830 | 0 | 0 | 6,091,222 | 13,504,772 | 13,742,556 |
| 2001 | 23,847 | 299,290 | 103,281 | (7,057) | 568,968 | 3,960 | (1,112) | 0 | 0 | 668,040 | 5,130,622 | 7,470,509 |
| 2002 | 62,684 | 585,580 | 98,021 | 147,827 | 105,972 | 77,266 | 13,119 | 0 | 0 | 442,205 | 8,836,703 | 17,138,613 |
| 2003 | 34,282 | 305,814 | 42,075 | 43,753 | 31,706 | 25,734 | 6,272 | 0 | 0 | 149,540 | 3,105,113 | 10,869,932 |
| 2004 | 16,535 | 422,421 | 26,667 | 13,644 | 21,479 | 3,142 | 1,942 | 0 | 0 | 66,874 | 5,117,637 | 10,222,861 |
| 2005 | 594,037 | 993,552 | 29,322 | (260,207) | 38,485 | 694 | 510 | 0 | 0 | (191,196) | 8,117,044 | 10,592,038 |
| 2006 | 164,760 | 3,245,481 | 7,049 | 6,035 | 37,612 | (31) | 17,974 | 0 | 0 | 68,639 | 15,613,671 | 19,710,708 |
| 2007 | 31,047 | 2,392,192 | 37,460 | 32,702 | 42,774 | 0 | 152 | 0 | 0 | 113,088 | 13,445,492 | 19,916,955 |
| 2008 | 60,186 | 3,272,409 | 41,227 | 34,997 | 10,865 | 24 | 14,163 | 0 | 0 | 101,276 | 14,464,754 | 28,271,869 |
| 2009 | 47,211 | 3,483,544 | 19,458 | 17,409 | 2,357 | 43 | 44,176 | 0 | 0 | 83,443 | 26,355,624 | 39,969,780 |
| 2010 | 20,999 | 635,157 | 29,558 | 35,571 | 0 | 1,004 | 1,022,254 | 0 | 0 | 1,088,387 | 68,060,604 | 91,783,970 |
| 2011 | 2,030,375 | 3,334,018 | 279,688 | 253,926 | 0 | 1,004 | 1,022,254 | 0 | 0 | 1,556,872 | 129,356,608 | 134,197,730 |
| 2012 | 8,309,588 | 10,108,046 | 276,711 | 251,327 | 0 | 1,004 | 1,022,254 | 0 | 0 | 1,551,296 | 119,149,414 | 120,514,589 |
| 2013 | 14,260,174 | 14,895,796 | 295,546 | 267,770 | 0 | 1,004 | 1,022,254 | 0 | 0 | 1,586,574 | 44,227,993 | 45,673,869 |
| 2014 | 20,833,811 | 21,380,997 | 217,337 | 199,496 | 0 | 1,004 | 1,022,254 | 0 | 0 | 1,440,091 | 38,102,717 | 39,183,328 |
| 2015 | 20,761,694 | 21,019,230 | 10,179 | 18,654 | 0 | 1,004 | 1,022,254 | 0 | 0 | 1,052,091 | 29,953,273 | 30,070,360 |
| 2016 | 11,342,916 | 11,372,228 | 1,636 | 11,197 | 0 | 1,004 | 1,022,254 | 0 | 0 | 1,036,091 | 16,025,654 | 16,102,998 |
| 2017 | 12,771 | 42,083 | 1,636 | 11,197 | 0 | 1,004 | 1,022,254 | 0 | 0 | 1,036,091 | 1,939,120 | 2,016,464 |
| 2018 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2019 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2020 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2021 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2022 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2023 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2024 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2025 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2026 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2027 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |

**TABLE B-11. Minimum OMP&R Costs of Each Aqueduct Reach to be Reimbursed
through Minimum OMP&R Component of Transportation Charge**

(in dollars)

Sheet 1 of 9

| Calendar Year | UPPER FEATHER DIVISION | NORTH BAY AQUEDUCT | | | | | SOUTH BAY AQUEDUCT | | | |
|------------------|------------------------------|--------------------|------------|------------|------------|-------------|--------------------|------------|------------|------------|
| | | Reach 1 | Reach 2 | Reach 3A | Reach 3B | Total | Reach 1 | Reach 2 | Reach 4 | Reach 5 |
| | [1] | [2] | [3] | [4] | [5] | [6] | [7] | [8] | [9] | [10] |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 37,396 | 5,522 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 147,719 | 20,639 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 149,750 | 15,574 | 19,405 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 259,939 | 45,718 | 46,485 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 270,890 | 23,799 | 63,921 | 0 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 438,050 | 32,798 | 108,127 | 0 |
| 1968 | 0 | 0 | 0 | 0 | 130 | 130 | 410,919 | 44,277 | 66,973 | 706 |
| 1969 | 0 | 0 | 0 | 0 | 80,875 | 80,875 | 487,377 | 48,339 | 75,644 | 706 |
| 1970 | 0 | 0 | 0 | 0 | 94,872 | 94,872 | 381,734 | 44,852 | 64,833 | 71,376 |
| 1971 | 54 | 0 | 0 | 0 | 45,579 | 45,579 | 357,850 | 25,666 | 50,344 | 38,735 |
| 1972 | 40 | 0 | 0 | 0 | 37,895 | 37,895 | 347,941 | 30,606 | 56,800 | 100,106 |
| 1973 | 1 | 0 | 0 | 0 | 32,993 | 32,993 | 386,897 | 36,172 | 58,288 | 28,810 |
| 1974 | 143 | 0 | 0 | 0 | 46,498 | 46,498 | 456,381 | 57,081 | 83,120 | 61,623 |
| 1975 | 1,069 | 0 | 0 | 0 | 37,707 | 37,707 | 624,989 | 46,111 | 81,361 | 36,682 |
| 1976 | 139 | 0 | 0 | 0 | 60,786 | 60,786 | 614,362 | 47,862 | 123,838 | 91,096 |
| 1977 | 892 | 0 | 0 | 0 | 78,400 | 78,400 | 511,065 | 48,926 | 104,280 | 102,083 |
| 1978 | 39 | 0 | 0 | 0 | 56,318 | 56,318 | 671,195 | 125,224 | 176,855 | 50,289 |
| 1979 | 3,235 | 0 | 0 | 0 | 73,852 | 73,852 | 650,826 | 76,849 | 212,826 | 91,380 |
| 1980 | 416 | 0 | 0 | 0 | 81,769 | 81,769 | 1,128,840 | 212,974 | 242,118 | 110,786 |
| 1981 | 3,847 | 0 | 0 | 0 | 101,340 | 101,340 | 884,763 | 130,126 | 167,118 | 204,772 |
| 1982 | 11,075 | 0 | 0 | 0 | 191,987 | 191,987 | 1,156,605 | 141,718 | 249,447 | 96,020 |
| 1983 | 1,928 | 0 | 0 | 0 | 80,215 | 80,215 | 1,258,144 | 84,360 | 373,875 | 152,255 |
| 1984 | 3,765 | 0 | 0 | 0 | 139,121 | 139,121 | 1,998,984 | 113,797 | 340,344 | 34,461 |
| 1985 | 2,888 | 0 | 0 | 0 | 259,515 | 259,515 | 2,044,121 | 207,478 | 427,930 | 247,308 |
| 1986 | 2,787 | 0 | 0 | 0 | 229,508 | 229,508 | 1,834,838 | 285,908 | 305,149 | 159,054 |
| 1987 | 2,388 | 0 | 0 | 0 | 310,683 | 310,683 | 2,118,974 | 163,714 | 400,547 | 283,067 |
| 1988 | 545 | 0 | (94) | 0 | 330,156 | 330,062 | 2,068,655 | 186,275 | 299,934 | 370,212 |
| 1989 | 1,800 | 473,408 | 178,069 | 237,480 | 373,427 | 1,262,384 | 2,164,688 | 163,481 | 320,734 | 497,038 |
| 1990 | 788 | 556,610 | 244,897 | 123,144 | 427,257 | 1,351,908 | 2,233,036 | 251,434 | 355,022 | 571,415 |
| 1991 | 3,654 | 651,307 | 302,327 | 205,516 | 428,470 | 1,587,620 | 1,806,699 | 152,509 | 95,745 | 93,986 |
| 1992 | 647 | 443,912 | 189,330 | 265,462 | 280,505 | 1,179,209 | 2,064,907 | 405,932 | 409,435 | 363,964 |
| 1993 | 3,630 | 435,240 | 294,416 | 213,267 | 289,206 | 1,232,129 | 3,925,050 | 621,712 | 480,832 | 399,558 |
| 1994 | 2,279 | 430,112 | 198,322 | 206,594 | 365,646 | 1,200,674 | 4,673,275 | 302,115 | 404,709 | 408,066 |
| 1995 | 2,906 | 428,313 | 282,898 | 151,703 | 295,326 | 1,158,240 | 3,849,620 | 316,905 | 566,447 | 330,706 |
| 1996 | 8,007 | 796,526 | 272,743 | 240,106 | 260,001 | 1,569,376 | 3,526,989 | 254,075 | 664,485 | 493,300 |
| 1997 | 7,449 | 504,476 | 210,763 | 213,211 | 315,374 | 1,243,824 | 3,010,809 | 189,269 | 591,540 | 230,371 |
| 1998 | 798 | 404,834 | 227,562 | 204,821 | 251,154 | 1,088,371 | 2,965,219 | 426,872 | 532,042 | 303,263 |
| 1999 | 416 | 670,029 | 327,821 | 296,605 | 287,458 | 1,581,913 | 3,702,183 | 472,880 | 429,328 | 445,225 |
| 2000 | 505 | 921,003 | 255,210 | 658,258 | 414,697 | 2,249,168 | 3,819,448 | 542,899 | 442,492 | 553,544 |
| 2001 | 319 | 1,072,686 | 229,883 | 455,912 | 181,531 | 1,940,012 | 2,909,760 | 272,874 | 290,322 | 391,130 |
| 2002 | 3,627 | 1,589,005 | 417,022 | 411,818 | 399,597 | 2,817,442 | 3,869,187 | 343,585 | 469,230 | 543,946 |
| 2003 | 3,393 | 1,783,642 | 548,135 | 572,440 | 357,560 | 3,261,777 | 2,389,797 | 371,053 | 585,167 | 973,236 |
| 2004 | 3,455 | 1,609,860 | 638,150 | 743,768 | 822,217 | 3,813,995 | 3,390,236 | 516,653 | 758,425 | 710,734 |
| 2005 | 3,452 | 1,063,038 | 323,994 | 769,020 | 413,843 | 2,569,895 | 3,329,155 | 265,075 | 431,811 | 813,322 |
| 2006 | 3,984 | 811,741 | 246,484 | 591,696 | 426,634 | 2,076,555 | 3,215,721 | 361,259 | 711,571 | 613,695 |
| 2007 | 3,432 | 1,057,631 | 1,030,349 | 716,271 | 215,886 | 3,020,137 | 4,691,882 | 450,698 | 762,097 | 882,807 |
| 2008 | 3,890 | 893,885 | 291,801 | 521,441 | 599,946 | 2,307,073 | 4,348,184 | 585,669 | 643,916 | 942,681 |
| 2009 | 772 | 998,760 | 303,783 | 571,302 | 750,105 | 2,623,950 | 3,520,692 | 526,956 | 579,132 | 1,128,097 |
| 2010 | 1,694 | 1,506,912 | 557,151 | 624,480 | 466,172 | 3,154,715 | 4,330,277 | 532,127 | 681,978 | 437,016 |
| 2011 | 1,768 | 1,602,367 | 594,236 | 691,593 | 518,717 | 3,406,913 | 4,863,601 | 599,908 | 760,350 | 982,535 |
| 2012 | 1,863 | 1,608,796 | 614,794 | 685,072 | 518,206 | 3,426,868 | 4,779,208 | 592,881 | 758,364 | 1,022,823 |
| 2013 | 1,793 | 1,588,419 | 594,614 | 673,718 | 506,042 | 3,362,793 | 4,704,272 | 580,722 | 740,900 | 822,265 |
| 2014 | 1,811 | 1,604,303 | 600,560 | 680,456 | 511,103 | 3,396,422 | 4,751,315 | 586,529 | 748,309 | 830,488 |
| 2015 | 1,829 | 1,620,346 | 606,566 | 687,260 | 516,214 | 3,430,386 | 4,798,828 | 592,394 | 755,792 | 838,793 |
| 2016 | 1,847 | 1,636,550 | 612,632 | 694,133 | 521,376 | 3,464,691 | 4,846,816 | 598,318 | 763,350 | 847,181 |
| 2017 | 1,866 | 1,652,915 | 618,758 | 701,074 | 526,590 | 3,499,337 | 4,895,284 | 604,301 | 770,983 | 855,653 |
| 2018 | 1,884 | 1,669,444 | 624,946 | 708,085 | 531,856 | 3,534,331 | 4,944,237 | 610,344 | 778,693 | 864,209 |
| 2019 | 1,903 | 1,686,139 | 631,195 | 715,166 | 537,174 | 3,569,674 | 4,993,679 | 616,448 | 786,480 | 872,851 |
| 2020 | 1,922 | 1,703,000 | 637,507 | 722,317 | 542,546 | 3,605,370 | 5,043,616 | 622,612 | 794,345 | 881,580 |
| 2021 | 1,941 | 1,720,030 | 643,882 | 729,541 | 547,971 | 3,641,424 | 5,094,052 | 628,838 | 802,288 | 890,395 |
| 2022 | 1,961 | 1,737,230 | 650,321 | 736,836 | 553,451 | 3,677,838 | 5,144,993 | 635,127 | 810,311 | 899,299 |
| 2023 | 1,980 | 1,754,603 | 656,824 | 744,204 | 558,986 | 3,714,617 | 5,196,443 | 641,478 | 818,414 | 908,292 |
| 2024 | 2,000 | 1,772,149 | 663,392 | 751,646 | 564,575 | 3,751,762 | 5,248,407 | 647,893 | 826,598 | 917,375 |
| 2025 | 2,020 | 1,789,870 | 670,026 | 759,163 | 570,221 | 3,789,280 | 5,300,891 | 654,372 | 834,864 | 926,549 |
| 2026 | 2,040 | 1,807,769 | 676,727 | 766,754 | 575,923 | 3,827,173 | 5,353,900 | 660,915 | 843,213 | 935,815 |
| 2027 | 2,061 | 1,825,847 | 683,494 | 774,422 | 581,683 | 3,865,446 | 5,407,439 | 667,525 | 851,645 | 945,173 |
| 2028 | 2,081 | 1,844,105 | 690,329 | 782,166 | 587,499 | 3,904,099 | 5,461,514 | 674,200 | 860,161 | 954,624 |
| 2029 | 2,102 | 1,862,546 | 697,232 | 789,988 | 593,374 | 3,943,140 | 5,516,129 | 680,942 | 868,763 | 964,171 |
| 2030 | 2,123 | 1,881,172 | 704,204 | 797,888 | 599,308 | 3,982,572 | 5,571,290 | 687,751 | 877,451 | 973,812 |
| 2031 | 2,144 | 1,899,983 | 711,246 | 805,867 | 605,301 | 4,022,397 | 5,627,003 | 694,629 | 886,225 | 983,550 |
| 2032 | 2,166 | 1,918,983 | 718,359 | 813,925 | 611,354 | 4,062,621 | 5,683,273 | 701,575 | 895,087 | 993,386 |
| 2033 | 2,187 | 1,938,173 | 725,542 | 822,065 | 617,468 | 4,103,248 | 5,740,106 | 708,591 | 904,038 | 1,003,320 |
| 2034 | 2,209 | 1,957,555 | 732,798 | 830,285 | 623,642 | 4,144,280 | 5,797,507 | 715,677 | 913,079 | 1,013,353 |
| 2035 | 2,231 | 1,977,130 | 740,126 | 838,588 | 629,879 | 4,185,723 | 5,855,482 | 722,834 | 922,210 | 1,023,487 |
| TOTAL | 145,880 | 63,162,354 | 24,071,326 | 27,696,527 | 25,042,670 | 139,972,877 | 226,055,303 | 26,755,201 | 35,977,935 | 37,609,606 |

TABLE B-11. Minimum OMP&R Costs of Each Aqueduct Reach to be Reimbursed through Minimum OMP&R Component of Transportation Charge

(in dollars)

Sheet 2 of 9

| Calendar Year | SOUTH BAY AQUEDUCT (continued) | | | | | CALIFORNIA AQUEDUCT | | | |
|------------------|--------------------------------|-----------|-----------|------------|-------------|----------------------------|------------|-------------|-------------|
| | | | | | | NORTH SAN JOAQUIN DIVISION | | | |
| | Reach 6 | Reach 7 | Reach 8 | Reach 9 | Total | Reach 1 | Reach 2A | Reach 2B | Subtotal |
| | [11] | [12] | [13] | [14] | [15] | [16] | [17] | [18] | [19] |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1962 | 0 | 0 | 0 | 0 | 42,918 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 168,358 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 184,729 | 0 | 0 | 0 | 0 |
| 1965 | 2,634 | 6,490 | 4,704 | 12,904 | 378,874 | 0 | 0 | 0 | 0 |
| 1966 | 4,707 | 10,328 | 9,233 | 25,519 | 408,397 | 0 | 0 | 0 | 0 |
| 1967 | 2,712 | 7,659 | 10,812 | 34,347 | 634,505 | 0 | 0 | 0 | 0 |
| 1968 | 3,109 | 7,960 | 10,166 | 40,372 | 584,482 | 1,001,998 | 228,359 | 103,116 | 1,333,473 |
| 1969 | 3,944 | 5,975 | 8,795 | 38,566 | 669,346 | 933,116 | 301,596 | 188,194 | 1,422,906 |
| 1970 | 2,464 | (1,991) | 6,870 | 28,210 | 598,348 | 971,602 | 306,198 | 151,539 | 1,429,339 |
| 1971 | 3,116 | 9,394 | 9,895 | 31,068 | 526,068 | 1,103,021 | 254,786 | 113,694 | 1,471,501 |
| 1972 | 5,125 | 10,247 | 12,054 | 44,699 | 607,578 | 1,107,855 | 230,906 | 110,109 | 1,448,870 |
| 1973 | 4,178 | 7,500 | 4,890 | 43,816 | 570,551 | 1,150,864 | 221,445 | 100,221 | 1,472,530 |
| 1974 | 7,812 | 7,564 | 5,523 | 48,054 | 727,158 | 1,272,034 | 231,383 | 117,156 | 1,620,573 |
| 1975 | 18,120 | 14,683 | 18,325 | 68,377 | 908,648 | 1,434,736 | 455,110 | 201,075 | 2,090,921 |
| 1976 | 10,873 | 5,557 | 19,920 | 49,921 | 963,429 | 1,519,801 | 217,348 | 453,400 | 2,190,549 |
| 1977 | (240) | 2,228 | 8,391 | 89,579 | 866,312 | 1,913,643 | 292,380 | 196,564 | 2,402,587 |
| 1978 | (1,404) | 16,766 | (5,313) | 104,078 | 1,137,690 | 1,860,456 | 306,503 | 188,214 | 2,355,173 |
| 1979 | 1,269 | 29,294 | 7,351 | 106,835 | 1,176,630 | 1,848,109 | 231,339 | 145,205 | 2,224,653 |
| 1980 | 3,621 | 24,270 | 17,404 | 110,852 | 1,850,865 | 2,365,292 | 472,660 | 247,608 | 3,085,560 |
| 1981 | 4,038 | 20,109 | 17,586 | 98,143 | 1,526,655 | 2,649,730 | 435,226 | 154,191 | 3,239,147 |
| 1982 | 2,236 | 22,870 | 21,919 | 202,590 | 1,893,405 | 3,192,710 | 599,793 | 244,664 | 4,037,167 |
| 1983 | (2,047) | 48,781 | 45,573 | 216,434 | 2,177,375 | 4,244,937 | 802,908 | 273,081 | 5,320,926 |
| 1984 | 4,449 | 44,017 | 23,563 | 455,054 | 3,014,669 | 4,373,157 | 808,917 | 290,728 | 5,472,802 |
| 1985 | 13,097 | 74,565 | 57,920 | 238,067 | 3,310,486 | 4,717,323 | 629,825 | 189,199 | 5,536,347 |
| 1986 | 11,614 | 31,084 | 46,864 | 363,350 | 3,037,861 | 5,217,491 | 929,919 | 359,365 | 6,506,775 |
| 1987 | 15,273 | 25,182 | 37,949 | 416,375 | 3,461,081 | 5,292,200 | 958,927 | 362,065 | 6,613,192 |
| 1988 | 30,207 | 41,047 | 49,156 | 335,408 | 3,380,894 | 5,329,317 | 822,300 | 360,336 | 6,511,953 |
| 1989 | 9,740 | 54,881 | 114,203 | 179,323 | 3,504,088 | 5,753,966 | 851,745 | 907,609 | 7,513,320 |
| 1990 | 31,161 | 69,416 | 119,309 | 247,781 | 3,878,574 | 6,788,986 | 1,066,314 | 883,822 | 8,739,122 |
| 1991 | 22,434 | (18,690) | 99,577 | 262,052 | 2,514,312 | 6,796,247 | 1,067,078 | 585,008 | 8,448,333 |
| 1992 | 26,787 | 332,012 | 98,670 | 186,640 | 3,888,347 | 9,415,121 | 1,419,603 | 673,833 | 11,508,557 |
| 1993 | 24,845 | 181,592 | 94,169 | 316,045 | 6,043,803 | 10,274,070 | 1,371,074 | 900,996 | 12,546,140 |
| 1994 | 28,383 | 90,791 | 80,942 | 416,061 | 6,404,342 | 8,451,199 | 1,325,511 | 802,217 | 10,578,927 |
| 1995 | 29,298 | 64,012 | 80,278 | 373,657 | 5,610,923 | 10,406,784 | 2,386,507 | 959,685 | 13,752,976 |
| 1996 | (1,020) | 60,610 | 11,672 | 312,097 | 5,322,208 | 10,246,985 | 2,604,651 | 628,177 | 13,479,813 |
| 1997 | 18,428 | 95,321 | 15,691 | 335,566 | 4,486,995 | 10,429,338 | 1,098,381 | 2,084,859 | 13,612,578 |
| 1998 | 26,323 | 54,255 | 611,290 | 658,090 | 5,577,354 | 11,409,135 | 1,449,411 | 5,364,368 | 18,222,914 |
| 1999 | 49,762 | 34,829 | 427,062 | 2,030,675 | 7,591,944 | 11,449,795 | 1,418,704 | 1,316,602 | 14,185,101 |
| 2000 | 135,857 | 87,815 | 185,985 | 641,442 | 6,409,482 | 12,638,590 | 902,292 | 647,292 | 14,188,174 |
| 2001 | 112,970 | 188,981 | 197,745 | 1,048,185 | 5,411,967 | 17,560,151 | 1,386,900 | 756,074 | 19,703,125 |
| 2002 | 144,094 | 171,650 | 501,729 | 2,781,794 | 8,825,215 | 14,446,099 | 868,440 | 625,351 | 15,939,890 |
| 2003 | 80,246 | 99,524 | 248,998 | 991,370 | 5,739,391 | 16,698,845 | 1,768,672 | 769,959 | 19,237,476 |
| 2004 | 159,261 | 181,123 | 206,697 | 458,730 | 6,381,859 | 14,104,768 | 1,242,224 | 698,975 | 16,045,967 |
| 2005 | 143,875 | 202,953 | 135,954 | 225,719 | 5,547,864 | 12,522,248 | 1,951,763 | 880,961 | 15,354,972 |
| 2006 | 141,269 | 123,164 | 80,196 | 393,870 | 5,640,745 | 13,979,600 | 1,941,684 | 1,272,181 | 17,193,465 |
| 2007 | 60,675 | 131,228 | 67,651 | 269,037 | 7,316,075 | 10,703,896 | 2,080,746 | 931,444 | 13,716,076 |
| 2008 | 154,937 | 149,922 | 220,874 | 281,697 | 7,327,880 | 15,819,415 | 1,598,308 | 866,743 | 18,284,466 |
| 2009 | 122,523 | 135,149 | 166,893 | 556,293 | 6,735,735 | 14,419,902 | 1,400,798 | 891,021 | 16,711,721 |
| 2010 | 114,524 | 141,713 | 153,869 | 288,627 | 6,680,131 | 14,869,835 | 1,711,308 | 912,011 | 17,493,154 |
| 2011 | 132,563 | 159,357 | 177,441 | 314,386 | 7,990,141 | 16,707,145 | 1,904,807 | 1,160,721 | 19,772,673 |
| 2012 | 128,203 | 157,818 | 172,131 | 319,641 | 7,931,069 | 16,293,233 | 1,900,966 | 6,286,650 | 24,480,849 |
| 2013 | 126,348 | 154,493 | 169,492 | 310,627 | 7,609,119 | 16,116,305 | 1,857,417 | 2,814,326 | 20,788,048 |
| 2014 | 127,611 | 156,038 | 171,187 | 313,733 | 7,685,210 | 16,277,468 | 1,875,991 | 2,842,469 | 20,995,928 |
| 2015 | 128,888 | 157,598 | 172,899 | 316,870 | 7,762,062 | 16,440,243 | 1,894,751 | 2,870,894 | 21,205,888 |
| 2016 | 130,176 | 159,174 | 174,628 | 320,039 | 7,839,682 | 16,604,646 | 1,913,699 | 2,899,602 | 21,417,947 |
| 2017 | 131,478 | 160,766 | 176,374 | 323,239 | 7,918,078 | 16,770,692 | 1,932,836 | 2,928,599 | 21,632,127 |
| 2018 | 132,793 | 162,373 | 178,138 | 326,472 | 7,997,259 | 16,938,399 | 1,952,164 | 2,957,885 | 21,848,448 |
| 2019 | 134,121 | 163,997 | 179,919 | 329,736 | 8,077,231 | 17,107,783 | 1,971,686 | 2,987,463 | 22,066,932 |
| 2020 | 135,462 | 165,637 | 181,719 | 333,034 | 8,158,005 | 17,278,861 | 1,991,403 | 3,017,338 | 22,287,602 |
| 2021 | 136,817 | 167,293 | 183,536 | 336,364 | 8,239,583 | 17,451,649 | 2,011,317 | 3,047,511 | 22,510,477 |
| 2022 | 138,185 | 168,966 | 185,371 | 339,728 | 8,321,980 | 17,626,166 | 2,031,430 | 3,077,986 | 22,735,582 |
| 2023 | 139,567 | 170,656 | 187,225 | 343,125 | 8,405,200 | 17,802,428 | 2,051,744 | 3,108,766 | 22,962,938 |
| 2024 | 140,962 | 172,363 | 189,097 | 346,556 | 8,489,251 | 17,980,452 | 2,072,262 | 3,139,854 | 23,192,568 |
| 2025 | 142,372 | 174,086 | 190,988 | 350,022 | 8,574,144 | 18,160,256 | 2,092,984 | 3,171,253 | 23,424,493 |
| 2026 | 143,796 | 175,827 | 192,898 | 353,522 | 8,659,886 | 18,341,859 | 2,113,914 | 3,202,965 | 23,658,738 |
| 2027 | 145,234 | 177,585 | 194,827 | 357,057 | 8,746,485 | 18,525,277 | 2,135,053 | 3,234,995 | 23,895,325 |
| 2028 | 146,686 | 179,361 | 196,775 | 360,628 | 8,833,949 | 18,710,530 | 2,156,404 | 3,267,345 | 24,134,279 |
| 2029 | 148,153 | 181,155 | 198,743 | 364,234 | 8,922,290 | 18,897,636 | 2,177,968 | 3,300,018 | 24,375,622 |
| 2030 | 149,634 | 182,966 | 200,730 | 367,876 | 9,011,510 | 19,086,612 | 2,199,748 | 3,333,018 | 24,619,378 |
| 2031 | 151,131 | 184,796 | 202,738 | 371,555 | 9,101,627 | 19,277,478 | 2,221,745 | 3,366,348 | 24,865,571 |
| 2032 | 152,642 | 186,644 | 204,765 | 375,271 | 9,192,643 | 19,470,253 | 2,243,962 | 3,400,012 | 25,114,227 |
| 2033 | 154,169 | 188,510 | 206,813 | 379,023 | 9,284,570 | 19,664,955 | 2,266,402 | 3,434,012 | 25,365,369 |
| 2034 | 155,710 | 190,395 | 208,881 | 382,814 | 9,377,416 | 19,861,605 | 2,289,066 | 3,468,352 | 25,619,023 |
| 2035 | 157,267 | 192,299 | 210,970 | 386,642 | 9,471,191 | 20,060,221 | 2,311,957 | 3,503,036 | 25,875,214 |
| TOTAL | 5,297,247 | 7,393,983 | 9,077,289 | 25,079,563 | 373,246,127 | 760,136,509 | 94,221,618 | 108,730,330 | 963,088,457 |

TABLE B-11. Minimum OMP&R Costs of Each Aqueduct Reach to be Reimbursed through Minimum OMP&R Component of Transportation Charge

(in dollars)

Sheet 3 of 9

| Calendar Year | CALIFORNIA AQUEDUCT (continued) | | | | | | | | |
|------------------|---------------------------------|-------------|-------------|------------|------------|-------------|----------------------------|------------|------------|
| | SAN LUIS DIVISION | | | | | | SOUTH SAN JOAQUIN DIVISION | | |
| | Reach 3 | Reach 4 | Reach 5 | Reach 6 | Reach 7 | Subtotal | Reach 8C | Reach 8D | Reach 9 |
| | [20] | [21] | [22] | [23] | [24] | [25] | [26] | [27] | [28] |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1968 | 120,038 | 428,308 | 130,105 | 44,591 | 104,033 | 827,075 | 0 | 0 | 0 |
| 1969 | 90,033 | 460,907 | 184,467 | 35,696 | 235,322 | 1,006,425 | 22,013 | 134,760 | 86,103 |
| 1970 | 89,547 | 484,300 | 226,002 | 66,070 | 192,582 | 1,058,501 | 26,207 | 156,981 | 128,273 |
| 1971 | 99,917 | 541,574 | 175,592 | 64,193 | 158,170 | 1,039,446 | 32,312 | 190,753 | 118,372 |
| 1972 | 116,708 | 647,979 | 174,519 | 73,670 | 154,783 | 1,167,659 | 35,031 | 187,242 | 130,396 |
| 1973 | 116,791 | 611,705 | 158,145 | 58,344 | 153,955 | 1,098,940 | 51,150 | 225,747 | 127,530 |
| 1974 | 120,309 | 671,455 | 150,835 | 63,905 | 150,230 | 1,156,734 | 34,752 | 199,127 | 131,298 |
| 1975 | 133,593 | 839,285 | 178,974 | 81,478 | 157,586 | 1,390,916 | 78,523 | 250,377 | 159,006 |
| 1976 | 54,938 | 883,956 | 220,832 | 90,305 | 174,835 | 1,424,866 | 39,348 | 133,933 | 123,424 |
| 1977 | 73,331 | 1,114,465 | 270,734 | 98,132 | 196,311 | 1,752,973 | 38,086 | 121,348 | 178,078 |
| 1978 | 45,867 | 898,992 | 203,261 | 106,938 | 203,079 | 1,458,137 | 45,552 | 178,805 | 129,928 |
| 1979 | 223,973 | 842,508 | 144,055 | 99,670 | 180,734 | 1,490,940 | 69,973 | 150,679 | 129,756 |
| 1980 | 243,507 | 1,176,463 | 222,942 | 127,625 | 281,860 | 2,052,397 | 57,726 | 274,848 | 185,155 |
| 1981 | 265,766 | 1,065,358 | 193,048 | 90,533 | 1,612,157 | 3,226,862 | 80,121 | 198,256 | 144,187 |
| 1982 | 279,250 | 1,241,285 | 209,371 | 114,421 | 1,433,180 | 3,277,507 | 59,424 | 269,086 | 233,494 |
| 1983 | 214,468 | 1,949,017 | 339,809 | 131,377 | 2,143,678 | 4,778,349 | 49,448 | 383,476 | 223,078 |
| 1984 | 241,273 | 2,233,969 | 335,166 | 163,858 | 2,111,386 | 5,085,652 | 42,062 | 458,489 | 300,924 |
| 1985 | 322,068 | 2,882,583 | 360,431 | 176,577 | 1,603,532 | 5,345,191 | 58,820 | 495,500 | 213,368 |
| 1986 | 416,027 | 2,996,792 | 472,551 | 252,188 | 601,250 | 4,738,808 | 90,730 | 478,786 | 596,800 |
| 1987 | 362,738 | 3,104,592 | 424,107 | 236,349 | 439,232 | 4,567,018 | 113,962 | 412,042 | 446,067 |
| 1988 | 365,209 | 2,954,186 | 456,864 | 231,754 | 639,242 | 4,647,255 | 96,728 | 379,073 | 417,991 |
| 1989 | 263,171 | 3,182,472 | 393,589 | 332,986 | 633,419 | 4,805,637 | 83,282 | 389,698 | 400,853 |
| 1990 | 397,353 | 4,011,110 | 579,073 | 464,639 | 729,132 | 6,181,307 | 111,019 | 436,849 | 515,611 |
| 1991 | 256,473 | 4,388,184 | 543,760 | 728,156 | 765,765 | 6,682,338 | 104,414 | 496,794 | 465,940 |
| 1992 | 302,021 | 3,792,401 | 795,587 | 363,134 | 815,590 | 6,068,733 | 118,315 | 511,982 | 417,871 |
| 1993 | 439,725 | 4,337,616 | 1,008,394 | 551,849 | 734,796 | 7,072,380 | 230,338 | 745,885 | 490,159 |
| 1994 | 282,579 | 4,376,461 | 816,129 | 396,768 | 492,860 | 6,364,797 | 125,398 | 602,404 | 572,557 |
| 1995 | 107,995 | 5,026,076 | 1,066,971 | 440,006 | 1,356,668 | 7,997,716 | 185,681 | 657,282 | 432,072 |
| 1996 | 1,003,229 | 4,738,221 | 931,944 | 683,323 | 1,034,376 | 8,391,093 | 112,062 | 416,294 | 472,350 |
| 1997 | 859,665 | 5,761,996 | 924,289 | 254,934 | 646,209 | 8,447,093 | 128,190 | 449,316 | 728,436 |
| 1998 | 690,845 | 5,520,206 | 1,242,589 | 534,931 | 654,538 | 8,643,109 | 115,748 | 457,845 | 429,433 |
| 1999 | 582,553 | 5,669,986 | 1,193,463 | 522,593 | 657,297 | 8,625,892 | 105,183 | 418,129 | 400,683 |
| 2000 | 712,063 | 5,851,319 | 1,034,164 | 528,598 | 876,108 | 9,002,252 | 104,362 | 466,219 | 512,754 |
| 2001 | (576,206) | 7,166,712 | 851,545 | 372,875 | 679,646 | 8,494,572 | 58,460 | 554,801 | 604,594 |
| 2002 | 1,081,159 | 5,202,263 | 672,738 | 255,603 | 738,822 | 7,950,585 | 55,334 | 732,675 | 420,334 |
| 2003 | 1,053,675 | 6,142,242 | 764,776 | 315,559 | 633,428 | 8,909,680 | 63,205 | 687,465 | 662,343 |
| 2004 | 641,374 | 6,985,666 | 702,451 | 353,170 | 596,306 | 9,278,967 | 36,385 | 487,009 | 354,191 |
| 2005 | 551,140 | 5,972,934 | 983,445 | 400,970 | 798,484 | 8,706,973 | 28,928 | 408,364 | 303,237 |
| 2006 | (61,577) | 6,072,053 | 1,587,601 | 632,744 | 965,497 | 9,196,318 | 51,038 | 534,505 | 785,240 |
| 2007 | 1,113,965 | 7,283,047 | 2,036,562 | 780,966 | 936,221 | 12,150,661 | 206,217 | 1,025,845 | 554,636 |
| 2008 | 839,166 | 10,678,118 | 2,311,532 | 709,711 | 1,171,565 | 15,710,092 | 78,617 | 488,821 | 690,095 |
| 2009 | 1,042,345 | 7,694,239 | 1,265,928 | 576,100 | 1,201,519 | 11,780,131 | 69,256 | 566,250 | 602,737 |
| 2010 | 1,905,655 | 10,235,055 | 3,459,641 | 942,239 | 1,350,312 | 17,892,902 | 124,030 | 707,594 | 629,929 |
| 2011 | 1,081,516 | 7,739,955 | 2,425,509 | 1,480,827 | 2,912,187 | 15,639,994 | 126,625 | 726,676 | 635,909 |
| 2012 | 1,131,574 | 7,357,323 | 2,220,784 | 1,271,663 | 1,124,111 | 13,105,455 | 133,341 | 763,447 | 667,837 |
| 2013 | 1,386,644 | 8,528,552 | 2,728,998 | 1,243,892 | 1,813,492 | 15,701,578 | 129,279 | 739,898 | 651,005 |
| 2014 | 1,400,511 | 8,613,838 | 2,756,288 | 1,256,331 | 1,831,627 | 15,858,595 | 130,572 | 747,297 | 657,515 |
| 2015 | 1,414,516 | 8,699,976 | 2,783,851 | 1,268,894 | 1,849,944 | 16,017,181 | 131,877 | 754,770 | 664,090 |
| 2016 | 1,428,661 | 8,786,976 | 2,811,689 | 1,281,583 | 1,868,443 | 16,177,352 | 133,196 | 762,317 | 670,731 |
| 2017 | 1,442,947 | 8,874,846 | 2,839,806 | 1,294,399 | 1,887,127 | 16,339,125 | 134,528 | 769,941 | 677,438 |
| 2018 | 1,457,377 | 8,963,594 | 2,868,204 | 1,307,343 | 1,905,999 | 16,502,517 | 135,874 | 777,640 | 684,212 |
| 2019 | 1,471,951 | 9,053,230 | 2,896,886 | 1,320,416 | 1,925,059 | 16,667,542 | 137,232 | 785,416 | 691,054 |
| 2020 | 1,486,670 | 9,143,762 | 2,925,855 | 1,333,620 | 1,944,309 | 16,834,216 | 138,605 | 793,271 | 697,965 |
| 2021 | 1,501,537 | 9,235,200 | 2,955,114 | 1,346,957 | 1,963,752 | 17,002,560 | 139,991 | 801,203 | 704,945 |
| 2022 | 1,516,552 | 9,327,552 | 2,984,665 | 1,360,426 | 1,983,390 | 17,172,585 | 141,391 | 809,215 | 711,994 |
| 2023 | 1,531,718 | 9,420,827 | 3,014,511 | 1,374,030 | 2,003,224 | 17,344,310 | 142,804 | 817,307 | 719,114 |
| 2024 | 1,547,035 | 9,515,036 | 3,044,656 | 1,387,771 | 2,023,256 | 17,517,754 | 144,232 | 825,480 | 726,305 |
| 2025 | 1,562,505 | 9,610,186 | 3,075,103 | 1,401,648 | 2,043,489 | 17,692,931 | 145,675 | 833,735 | 733,568 |
| 2026 | 1,578,130 | 9,706,288 | 3,105,854 | 1,415,665 | 2,063,923 | 17,869,860 | 147,132 | 842,073 | 740,904 |
| 2027 | 1,593,912 | 9,803,351 | 3,136,913 | 1,429,822 | 2,084,563 | 18,048,561 | 148,603 | 850,493 | 748,313 |
| 2028 | 1,609,851 | 9,901,384 | 3,168,282 | 1,444,120 | 2,105,408 | 18,229,045 | 150,089 | 858,998 | 755,796 |
| 2029 | 1,625,949 | 10,000,398 | 3,199,965 | 1,458,561 | 2,126,462 | 18,411,335 | 151,590 | 867,588 | 763,354 |
| 2030 | 1,642,209 | 10,100,402 | 3,231,964 | 1,473,147 | 2,147,727 | 18,595,449 | 153,106 | 876,264 | 770,988 |
| 2031 | 1,658,631 | 10,201,406 | 3,264,284 | 1,487,878 | 2,169,204 | 18,781,403 | 154,637 | 885,027 | 778,697 |
| 2032 | 1,675,217 | 10,303,420 | 3,296,927 | 1,502,757 | 2,190,896 | 18,969,217 | 156,183 | 893,877 | 786,484 |
| 2033 | 1,691,969 | 10,406,454 | 3,329,896 | 1,517,784 | 2,212,805 | 19,158,908 | 157,745 | 902,816 | 794,349 |
| 2034 | 1,708,889 | 10,510,519 | 3,363,195 | 1,532,962 | 2,234,933 | 19,350,498 | 159,322 | 911,844 | 802,293 |
| 2035 | 1,725,978 | 10,615,624 | 3,396,827 | 1,548,292 | 2,257,283 | 19,544,004 | 160,916 | 920,962 | 810,316 |
| TOTAL | 55,356,068 | 392,538,155 | 105,224,007 | 48,290,316 | 82,068,308 | 683,476,854 | 7,001,975 | 38,038,889 | 33,724,459 |

TABLE B-11. Minimum OMP&R Costs of Each Aqueduct Reach to be Reimbursed through Minimum OMP&R Component of Transportation Charge

(in dollars)

Sheet 4 of 9

| Calendar Year | CALIFORNIA AQUEDUCT (continued) | | | | | | | | |
|------------------|--|------------|------------|------------|------------|-------------|------------|------------|-------------|
| | SOUTH SAN JOAQUIN DIVISION (continued) | | | | | | | | |
| | Reach 10A | Reach 11B | Reach 12D | Reach 12E | Reach 13B | Reach 14A | Reach 14B | Reach 14C | Reach 15A |
| | [29] | [30] | [31] | [32] | [33] | [34] | [35] | [36] | [37] |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1968 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1969 | 83.706 | 59.077 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1970 | 118.046 | 85.758 | 94.171 | 123.374 | 152.424 | 0 | 0 | 0 | 0 |
| 1971 | 129.811 | 80.282 | 95.075 | 91.389 | 167.142 | 691.791 | 151.979 | 111.623 | 529.723 |
| 1972 | 117.625 | 84.287 | 98.647 | 115.592 | 146.096 | 877.535 | 124.831 | 101.479 | 609.058 |
| 1973 | 117.706 | 92.257 | 74.238 | 114.843 | 221.385 | 961.855 | 120.106 | 99.429 | 692.748 |
| 1974 | 141.658 | 98.103 | 74.914 | 193.523 | 141.540 | 898.272 | 143.866 | 115.649 | 853.098 |
| 1975 | 207.908 | 124.105 | 61.799 | 117.194 | 108.154 | 1.156.757 | 180.614 | 119.889 | 988.045 |
| 1976 | 139.134 | 69.715 | 33.655 | 147.908 | 134.063 | 1.124.051 | 177.086 | 114.133 | 1.037.799 |
| 1977 | 194.086 | 108.644 | 91.547 | 175.039 | 137.975 | 1.397.006 | 203.837 | 119.467 | 1.339.196 |
| 1978 | 168.634 | 106.702 | 72.585 | 170.578 | 151.120 | 1.254.043 | 139.662 | 132.224 | 1.265.813 |
| 1979 | 175.107 | 85.942 | 56.331 | 174.147 | 150.029 | 1.490.461 | 201.935 | 260.981 | 1.216.126 |
| 1980 | 284.207 | 120.896 | 123.120 | 167.249 | 164.749 | 1.988.619 | 189.132 | 238.607 | 1.437.614 |
| 1981 | 199.927 | 76.965 | 33.322 | 113.202 | 171.669 | 1.741.488 | 165.934 | 161.182 | 1.799.832 |
| 1982 | 264.947 | 158.178 | 142.631 | 224.170 | 224.051 | 1.793.867 | 195.086 | 15.768 | 1.933.859 |
| 1983 | 308.801 | 136.350 | 124.724 | 203.733 | 217.324 | 2.421.794 | 199.708 | 181.879 | 2.550.842 |
| 1984 | 396.448 | 163.331 | 108.212 | 188.724 | 245.764 | 3.312.127 | 329.490 | 204.332 | 3.215.901 |
| 1985 | 298.337 | 198.368 | 154.995 | 194.327 | 360.308 | 3.463.178 | 237.127 | 180.068 | 3.427.049 |
| 1986 | 422.493 | 248.170 | 242.660 | 346.410 | 349.369 | 3.781.427 | 320.984 | 360.156 | 3.574.451 |
| 1987 | 488.226 | 334.059 | 325.697 | 469.378 | 322.824 | 3.731.912 | 463.757 | 238.813 | 4.080.465 |
| 1988 | 532.489 | 290.881 | 220.658 | 374.653 | 318.253 | 3.451.893 | 411.110 | 313.806 | 3.746.920 |
| 1989 | 733.030 | 268.025 | 207.487 | 595.433 | 380.883 | 3.512.884 | 333.996 | 220.978 | 3.751.081 |
| 1990 | 651.465 | 363.652 | 225.171 | 480.738 | 677.729 | 4.021.727 | 439.953 | 212.851 | 4.381.643 |
| 1991 | 716.328 | 328.683 | 269.873 | 371.312 | 433.313 | 4.309.082 | 424.704 | 273.169 | 4.566.702 |
| 1992 | 574.145 | 334.579 | 270.765 | 409.314 | 423.717 | 4.734.368 | 729.211 | 571.412 | 4.270.793 |
| 1993 | 723.450 | 413.722 | 278.375 | 496.851 | 594.201 | 5.182.830 | 664.063 | 423.780 | 5.266.124 |
| 1994 | 703.493 | 346.600 | 239.873 | 482.301 | 445.909 | 4.012.614 | 414.899 | 254.393 | 3.727.019 |
| 1995 | 881.902 | 405.045 | 242.253 | 622.654 | 507.102 | 4.607.154 | 309.283 | 315.905 | 3.973.757 |
| 1996 | 984.784 | 367.570 | 238.622 | 519.560 | 604.736 | 4.892.967 | 214.773 | 187.784 | 4.331.630 |
| 1997 | 1.864.113 | 309.696 | 254.080 | 516.115 | 429.771 | 5.094.202 | 261.221 | 275.610 | 4.011.366 |
| 1998 | 1.011.284 | 295.927 | 170.556 | 384.226 | 484.072 | 4.752.549 | 309.440 | 248.178 | 4.684.822 |
| 1999 | 1.148.513 | 387.544 | 191.828 | 413.328 | 526.178 | 5.016.993 | 330.019 | 215.683 | 4.819.889 |
| 2000 | 923.065 | 406.437 | 328.760 | 651.013 | 566.628 | 5.960.576 | 345.322 | 142.458 | 5.379.898 |
| 2001 | 872.342 | 416.355 | 896.722 | 522.133 | 661.940 | 4.697.711 | (137.153) | (96.930) | 6.012.189 |
| 2002 | 1.312.294 | 382.698 | 297.763 | 962.178 | 865.483 | 5.972.151 | 35.754 | 253.350 | 5.618.662 |
| 2003 | 827.628 | 344.104 | 238.298 | 705.482 | 625.941 | 6.249.986 | (129.506) | 22.116 | 7.102.198 |
| 2004 | 615.223 | 250.285 | 178.784 | 641.765 | 600.518 | 7.343.464 | (128.974) | (160.194) | 9.046.508 |
| 2005 | 902.594 | 213.673 | 119.913 | 855.596 | 472.737 | 6.274.987 | (177.533) | (189.305) | 5.924.537 |
| 2006 | 524.562 | 208.117 | 66.964 | 756.342 | 529.492 | 5.203.133 | (152.336) | (155.889) | 8.300.163 |
| 2007 | 641.723 | 397.007 | 313.725 | 758.984 | 523.438 | 5.628.197 | 143.810 | (366.684) | 12.188.065 |
| 2008 | 994.892 | 455.228 | 260.730 | 459.813 | 760.497 | 10.934.995 | (204.750) | (162.813) | 12.961.695 |
| 2009 | 992.475 | 444.061 | 226.154 | 545.210 | 689.367 | 8.074.813 | 247.655 | (30.958) | 8.640.327 |
| 2010 | 893.928 | 441.116 | 263.205 | 603.251 | 664.570 | 9.157.498 | 577.774 | 190.064 | 9.074.393 |
| 2011 | 904.229 | 447.219 | 270.921 | 616.047 | 670.231 | 9.072.236 | 596.174 | 194.072 | 9.367.001 |
| 2012 | 950.318 | 469.908 | 283.566 | 647.729 | 704.218 | 10.459.092 | 626.145 | 203.034 | 9.917.992 |
| 2013 | 925.320 | 457.275 | 275.290 | 628.565 | 686.470 | 9.658.571 | 606.031 | 197.680 | 9.547.660 |
| 2014 | 934.573 | 461.848 | 278.043 | 634.851 | 693.334 | 9.755.157 | 612.082 | 199.657 | 9.643.137 |
| 2015 | 943.919 | 466.467 | 280.823 | 641.200 | 700.268 | 9.852.709 | 618.213 | 201.654 | 9.739.568 |
| 2016 | 953.358 | 471.131 | 283.631 | 647.612 | 707.270 | 9.951.236 | 624.395 | 203.670 | 9.836.964 |
| 2017 | 962.891 | 475.843 | 286.468 | 654.088 | 714.343 | 10.050.748 | 630.639 | 205.707 | 9.935.334 |
| 2018 | 972.520 | 480.601 | 289.332 | 660.629 | 721.487 | 10.151.256 | 636.945 | 207.764 | 10.034.687 |
| 2019 | 982.245 | 485.407 | 292.226 | 667.235 | 728.701 | 10.252.768 | 643.314 | 209.842 | 10.135.034 |
| 2020 | 992.068 | 490.261 | 295.148 | 673.907 | 735.988 | 10.355.296 | 649.748 | 211.940 | 10.236.384 |
| 2021 | 1.001.989 | 495.164 | 298.099 | 680.646 | 743.348 | 10.458.849 | 656.245 | 214.059 | 10.338.748 |
| 2022 | 1.012.008 | 500.115 | 301.080 | 687.453 | 750.782 | 10.563.437 | 662.808 | 216.200 | 10.442.135 |
| 2023 | 1.022.128 | 505.117 | 304.091 | 694.327 | 758.290 | 10.669.072 | 669.436 | 218.362 | 10.546.557 |
| 2024 | 1.032.350 | 510.168 | 307.132 | 701.271 | 765.873 | 10.775.762 | 676.130 | 220.546 | 10.652.022 |
| 2025 | 1.042.673 | 515.269 | 310.203 | 708.283 | 773.531 | 10.883.520 | 682.891 | 222.751 | 10.758.543 |
| 2026 | 1.053.100 | 520.422 | 313.305 | 715.366 | 781.267 | 10.992.355 | 689.720 | 224.979 | 10.866.128 |
| 2027 | 1.063.631 | 525.626 | 316.438 | 722.520 | 789.079 | 11.102.279 | 696.617 | 227.228 | 10.974.789 |
| 2028 | 1.074.267 | 530.883 | 319.603 | 729.745 | 796.970 | 11.213.302 | 703.584 | 229.501 | 11.084.537 |
| 2029 | 1.085.010 | 536.191 | 322.799 | 737.042 | 804.940 | 11.325.435 | 710.619 | 231.796 | 11.195.383 |
| 2030 | 1.095.860 | 541.553 | 326.027 | 744.413 | 812.989 | 11.438.689 | 717.726 | 234.114 | 11.307.336 |
| 2031 | 1.106.819 | 546.969 | 329.287 | 751.857 | 821.119 | 11.553.076 | 724.903 | 236.455 | 11.420.410 |
| 2032 | 1.117.887 | 552.439 | 332.580 | 759.376 | 829.330 | 11.668.607 | 732.152 | 238.819 | 11.534.614 |
| 2033 | 1.129.066 | 557.963 | 335.906 | 766.969 | 837.624 | 11.785.293 | 739.473 | 241.207 | 11.649.960 |
| 2034 | 1.140.356 | 563.543 | 339.265 | 774.639 | 846.000 | 11.903.146 | 746.868 | 243.620 | 11.766.460 |
| 2035 | 1.151.760 | 569.178 | 342.657 | 782.385 | 854.460 | 12.022.177 | 754.337 | 246.056 | 11.884.124 |
| TOTAL | 49,932,874 | 23,178,754 | 15,642,805 | 33,887,187 | 35,380,373 | 429,087,035 | 25,613,074 | 11,195,156 | 437,157,507 |

**TABLE B-11. Minimum OMP&R Costs of Each Aqueduct Reach to be Reimbursed
through Minimum OMP&R Component of Transportation Charge**

(in dollars)

Sheet 5 of 9

| Calendar Year | CALIFORNIA AQUEDUCT (continued) | | | | | | | | |
|------------------|---|---------------|--------------------|------------|---------------|-----------------|------------|------------|------------|
| | SOUTH SAN JOAQUIN DIVISION (continued) | | TEHACHAPI DIVISION | | | MOJAVE DIVISION | | | |
| | Reach 16A | Subtotal | Reach 17E | Reach 17F | Subtotal | Reach 18A | Reach 19 | Reach 20A | Reach 20B |
| | [38] | [39] | [40] | [41] | [42] | [43] | [44] | [45] | [46] |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1968 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1969 | 0 | 385.659 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1970 | 0 | 885.234 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1971 | 10.291 | 2,400.543 | 3,471 | 0 | 3,471 | 0 | 0 | 0 | 0 |
| 1972 | 1,106.884 | 3,734.703 | 1,424.782 | 28.127 | 1,452.909 | 36.699 | 135.675 | 130.711 | 120.271 |
| 1973 | 1,243.941 | 4,142.935 | 1,777.260 | 49.949 | 1,827.209 | 36.207 | 146.739 | 161.838 | 148.631 |
| 1974 | 1,343.972 | 4,369.772 | 2,298.091 | 16.259 | 2,314.350 | 30.525 | 90.404 | 115.571 | 88.200 |
| 1975 | 1,537.862 | 5,090.233 | 2,403.430 | 35.193 | 2,438.623 | 40.588 | 122.584 | 137.684 | 118.898 |
| 1976 | 1,727.428 | 5,001.677 | 2,776.194 | 126.653 | 2,902.847 | 118.610 | 201.215 | 182.927 | 151.555 |
| 1977 | 1,961.081 | 6,065.390 | 3,845.464 | 83.936 | 3,929.400 | 93.565 | 226.906 | 180.884 | 112.589 |
| 1978 | 1,922.950 | 5,738.596 | 2,954.313 | 42.637 | 2,996.950 | 91.815 | 200.759 | 215.673 | 120.584 |
| 1979 | 1,798.566 | 5,960.033 | 3,539.402 | 45.997 | 3,585.399 | 99.670 | 307.386 | 261.205 | 194.104 |
| 1980 | 2,231.456 | 7,463.378 | 4,749.245 | 54.806 | 4,804.051 | 116.487 | 446.175 | 290.719 | 237.250 |
| 1981 | 2,762.773 | 7,646.858 | 5,485.957 | 64.886 | 5,550.843 | 316.590 | 585.003 | 325.112 | 292.081 |
| 1982 | 2,961.383 | 8,475.944 | 6,349.080 | 55.997 | 6,405.077 | 447.739 | 638.615 | 275.763 | 330.502 |
| 1983 | 4,302.165 | 11,303.322 | 14,153.033 | 96.397 | 14,249.430 | 345.229 | 564.698 | 368.139 | 326.767 |
| 1984 | 5,077.824 | 14,043.628 | 18,448.383 | 77.201 | 18,525.584 | 267.497 | 563.588 | 413.443 | 329.933 |
| 1985 | 5,683.454 | 14,964.899 | 18,134.698 | 137.928 | 18,272.626 | 298.932 | 475.028 | 450.444 | 388.327 |
| 1986 | 5,780.666 | 16,593.102 | 19,297.129 | 109.938 | 19,407.067 | 703.413 | 350.906 | 347.690 | 315.566 |
| 1987 | 5,636.043 | 17,063.245 | 17,398.908 | 98.355 | 17,497.263 | 1,261.056 | 558.996 | 818.475 | 357.971 |
| 1988 | 5,150.238 | 15,704.693 | 17,697.838 | 138.405 | 17,836.243 | 1,242.139 | 560.911 | 585.014 | 400.005 |
| 1989 | 5,458.633 | 16,336.263 | 17,641.151 | 88.488 | 17,729.639 | 1,049.615 | 283.065 | 366.590 | 345.614 |
| 1990 | 6,440.643 | 18,959.051 | 19,995.760 | 99.868 | 20,095.628 | 1,298.537 | 229.083 | 469.502 | 202.412 |
| 1991 | 5,805.189 | 18,565.503 | 19,903.346 | 131.558 | 20,034.904 | 1,432.360 | 665.443 | 1,025.089 | 516.257 |
| 1992 | 6,471.964 | 19,838.439 | 18,194.788 | 279.610 | 18,474.398 | 1,167.898 | 738.238 | 666.181 | 696.623 |
| 1993 | 7,583.165 | 23,092.943 | 19,051.939 | 199.640 | 19,251.579 | 1,868.745 | 606.763 | 1,232.409 | 818.675 |
| 1994 | 7,142.378 | 19,069.838 | 17,354.702 | 204.963 | 17,559.665 | 1,699.479 | 763.493 | 1,145.700 | 957.350 |
| 1995 | 6,540.575 | 19,680.665 | 19,360.033 | 191.516 | 19,551.549 | 1,284.146 | 614.314 | 1,941.939 | 2,411.412 |
| 1996 | 7,065.052 | 20,408.184 | 19,041.451 | 237.846 | 19,279.297 | 1,163.708 | 576.674 | 1,335.804 | 1,713.145 |
| 1997 | 7,387.904 | 21,710.020 | 19,724.881 | 176.120 | 19,901.001 | 1,330.450 | 730.628 | 1,401.562 | 2,043.179 |
| 1998 | 7,530.927 | 20,885.007 | 23,227.152 | 182.754 | 23,409.906 | 1,513.656 | 309.052 | 7,568.901 | 508.030 |
| 1999 | 8,731.913 | 22,735.883 | 19,705.186 | 157.805 | 19,862.991 | 3,124.995 | 719.928 | 5,383.577 | 1,657.385 |
| 2000 | 12,483.810 | 28,271.302 | 23,272.225 | 244.734 | 23,516.959 | 1,875.137 | 735.005 | 1,378.182 | 1,432.668 |
| 2001 | 15,792.026 | 30,855.190 | 24,057.353 | 618.635 | 24,675.988 | 2,441.694 | 2,555.074 | 1,847.327 | 1,531.044 |
| 2002 | 11,494.064 | 28,402.740 | 20,804.471 | 473.369 | 21,277.840 | 1,413.218 | 804.762 | 762.218 | 587.234 |
| 2003 | 11,665.478 | 29,064.748 | 21,009.594 | 286.394 | 21,295.988 | 3,806.980 | 688.240 | 723.134 | 631.828 |
| 2004 | 14,830.685 | 34,095.649 | 26,803.013 | 249.654 | 27,052.667 | 1,910.104 | 1,386.175 | 1,336.435 | 1,051.939 |
| 2005 | 13,911.704 | 29,049.432 | 16,459.904 | 1,499.910 | 17,959.814 | 2,867.939 | 1,506.853 | 1,546.748 | 883.071 |
| 2006 | 13,864.452 | 30,515.783 | 15,104.893 | 309.957 | 15,414.850 | 4,403.353 | 1,339.321 | 1,229.485 | 2,950.729 |
| 2007 | 7,919.677 | 29,934.640 | 14,926.187 | 1,144.816 | 16,071.003 | 4,287.156 | 1,544.231 | 1,508.441 | 2,146.321 |
| 2008 | 11,150.915 | 38,868.735 | 23,577.797 | 402.701 | 23,980.498 | 2,302.030 | 1,366.024 | 1,348.092 | 954.923 |
| 2009 | 13,923.961 | 34,991.308 | 21,829.741 | 337.884 | 22,167.625 | 2,455.307 | 1,408.003 | 1,380.213 | 1,084.401 |
| 2010 | 13,292.943 | 36,620.295 | 21,426.054 | 1,147.856 | 22,573.910 | 3,445.636 | 1,070.824 | 1,135.440 | 1,079.908 |
| 2011 | 14,068.440 | 37,695.780 | 27,999.693 | 1,157.049 | 29,156.742 | 3,060.386 | 1,125.389 | 1,183.852 | 1,350.101 |
| 2012 | 13,597.023 | 39,423.650 | 25,382.543 | 677.828 | 26,060.371 | 3,222.168 | 1,170.245 | 1,237.177 | 1,182.819 |
| 2013 | 13,789.330 | 38,292.374 | 25,185.457 | 1,004.186 | 26,189.643 | 3,275.157 | 1,133.375 | 1,197.345 | 1,216.319 |
| 2014 | 13,927.223 | 38,675.299 | 25,437.312 | 1,014.228 | 26,451.540 | 3,307.909 | 1,144.708 | 1,209.318 | 1,228.482 |
| 2015 | 14,066.496 | 39,062.054 | 25,691.685 | 1,024.371 | 26,716.056 | 3,340.988 | 1,156.155 | 1,221.412 | 1,240.767 |
| 2016 | 14,207.161 | 39,452.672 | 25,948.601 | 1,034.614 | 26,983.215 | 3,374.398 | 1,167.717 | 1,233.626 | 1,253.174 |
| 2017 | 14,349.232 | 39,847.200 | 26,208.088 | 1,044.960 | 27,253.048 | 3,408.142 | 1,179.394 | 1,245.962 | 1,265.706 |
| 2018 | 14,492.724 | 40,245.671 | 26,470.168 | 1,055.410 | 27,525.578 | 3,442.223 | 1,191.188 | 1,258.422 | 1,278.363 |
| 2019 | 14,637.652 | 40,648.126 | 26,734.870 | 1,065.964 | 27,800.834 | 3,476.645 | 1,203.100 | 1,271.006 | 1,291.147 |
| 2020 | 14,784.028 | 41,054.609 | 27,002.219 | 1,076.624 | 28,078.843 | 3,511.412 | 1,215.131 | 1,283.716 | 1,304.058 |
| 2021 | 14,931.868 | 41,465.154 | 27,272.241 | 1,087.390 | 28,359.631 | 3,546.526 | 1,227.282 | 1,296.553 | 1,317.099 |
| 2022 | 15,081.187 | 41,879.805 | 27,544.963 | 1,098.264 | 28,643.227 | 3,581.991 | 1,239.555 | 1,309.518 | 1,330.270 |
| 2023 | 15,231.999 | 42,298.604 | 27,820.413 | 1,109.247 | 28,929.660 | 3,617.811 | 1,251.951 | 1,322.614 | 1,343.573 |
| 2024 | 15,384.319 | 42,721.590 | 28,098.617 | 1,120.339 | 29,218.956 | 3,653.989 | 1,264.470 | 1,335.840 | 1,357.008 |
| 2025 | 15,538.162 | 43,148.804 | 28,379.603 | 1,131.542 | 29,511.145 | 3,690.529 | 1,277.115 | 1,349.198 | 1,370.578 |
| 2026 | 15,693.544 | 43,580.295 | 28,663.399 | 1,142.858 | 29,806.257 | 3,727.435 | 1,289.886 | 1,362.690 | 1,384.284 |
| 2027 | 15,850.479 | 44,016.095 | 28,950.033 | 1,154.286 | 30,104.319 | 3,764.709 | 1,302.765 | 1,376.317 | 1,398.127 |
| 2028 | 16,008.984 | 44,456.259 | 29,239.534 | 1,165.829 | 30,405.363 | 3,802.356 | 1,315.813 | 1,390.080 | 1,412.108 |
| 2029 | 16,169.074 | 44,900.821 | 29,531.929 | 1,177.488 | 30,709.817 | 3,840.380 | 1,328.971 | 1,403.981 | 1,426.229 |
| 2030 | 16,330.765 | 45,349.830 | 29,827.248 | 1,189.262 | 31,016.510 | 3,878.783 | 1,342.260 | 1,418.021 | 1,440.492 |
| 2031 | 16,494.072 | 45,803.328 | 30,125.521 | 1,201.155 | 31,326.676 | 3,917.571 | 1,355.683 | 1,432.201 | 1,454.897 |
| 2032 | 16,659.013 | 46,261.361 | 30,426.776 | 1,213.167 | 31,639.943 | 3,956.747 | 1,369.240 | 1,446.523 | 1,469.446 |
| 2033 | 16,825.603 | 46,723.974 | 30,731.044 | 1,225.298 | 31,956.342 | 3,996.314 | 1,382.932 | 1,460.988 | 1,484.140 |
| 2034 | 16,993.859 | 47,191.215 | 31,038.354 | 1,237.551 | 32,275.905 | 4,036.277 | 1,396.762 | 1,475.598 | 1,498.981 |
| 2035 | 17,163.798 | 47,663.126 | 31,348.738 | 1,249.927 | 32,598.665 | 4,076.640 | 1,410.729 | 1,490.354 | 1,513.971 |
| TOTAL | 651,003,070 | 1,790,843,158 | 1,286,267,348 | 37,587,579 | 1,323,854,927 | 144,196,390 | 58,258,617 | 75,296,573 | 64,049,521 |

TABLE B-11. Minimum OMP&R Costs of Each Aqueduct Reach to be Reimbursed through Minimum OMP&R Component of Transportation Charge

Sheet 6 of 9

| Calendar Year | CALIFORNIA AQUEDUCT (continued) | | | | | | | | |
|------------------|---------------------------------|------------|-------------|-------------|-------------|---------------|--------------------|-------------|------------|
| | MOJAVE DIVISION (continued) | | | | | | SANTA ANA DIVISION | | |
| | Reach 21 | Reach 22A | Reach 22B | Reach 23 | Reach 24 | Subtotal | Reach 25 | Reach 26A | Reach 28G |
| | [47] | [48] | [49] | [50] | [51] | [52] | [53] | [54] | [55] |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1968 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1969 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1970 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1972 | 75,768 | 80,436 | 1,036,831 | 51,520 | 362,153 | 2,030,064 | 26 | 578 | 109 |
| 1973 | 60,641 | 66,539 | 1,283,816 | 65,475 | 353,262 | 2,323,148 | 20,541 | 679,328 | 136,352 |
| 1974 | 65,007 | 77,667 | 1,477,946 | 96,340 | 334,302 | 2,375,962 | 24,380 | 799,400 | 155,262 |
| 1975 | 135,462 | 77,825 | 1,630,554 | 111,141 | 419,450 | 2,794,186 | 29,337 | 885,021 | 110,729 |
| 1976 | 106,314 | 131,007 | 1,598,071 | 107,787 | 304,638 | 2,902,124 | 51,356 | 1,103,139 | 138,575 |
| 1977 | 98,757 | 86,279 | 1,882,080 | 71,228 | 48,359 | 2,800,647 | 62,584 | 1,412,740 | 127,543 |
| 1978 | 109,271 | 71,763 | 2,211,965 | 72,179 | 637,401 | 3,731,410 | 67,186 | 1,159,950 | 166,919 |
| 1979 | 203,078 | 121,586 | 2,104,832 | 76,960 | 202,566 | 3,571,387 | 84,462 | 1,235,189 | 142,586 |
| 1980 | 156,794 | 117,274 | 2,670,387 | 147,009 | 688,605 | 4,870,700 | 72,651 | 1,532,535 | 158,340 |
| 1981 | 181,062 | 119,602 | 3,030,407 | 134,895 | 47,750 | 5,032,502 | 35,662 | 1,575,444 | 160,053 |
| 1982 | 186,109 | 125,429 | 3,248,883 | 299,712 | 623,755 | 6,176,507 | 26,852 | 1,822,250 | 205,350 |
| 1983 | 219,943 | 140,523 | 3,899,769 | 223,626 | 384,292 | 6,472,986 | 19,017 | 1,663,599 | 244,720 |
| 1984 | 266,919 | 146,866 | 4,783,997 | 59,337 | 1,104,149 | 7,935,729 | 11,319 | 2,325,661 | 240,496 |
| 1985 | 799,514 | 125,780 | 5,330,501 | 261,135 | 811,346 | 8,941,007 | 17,764 | 2,707,662 | 451,600 |
| 1986 | 242,158 | 178,847 | 6,190,812 | 156,053 | 515,945 | 9,001,390 | 31,012 | 2,768,728 | 439,048 |
| 1987 | 298,190 | 236,263 | 5,731,239 | 151,796 | 732,607 | 10,146,593 | 19,362 | 2,847,390 | 278,094 |
| 1988 | 331,099 | 149,876 | 6,910,472 | 253,833 | 970,052 | 11,403,401 | 36,576 | 3,087,873 | 271,868 |
| 1989 | 194,047 | 138,825 | 5,963,386 | 349,544 | 1,242,144 | 9,932,830 | 30,881 | 3,190,809 | 230,953 |
| 1990 | 273,748 | 49,174 | 6,905,442 | 436,785 | 1,891,053 | 11,755,736 | 25,518 | 3,330,913 | 437,812 |
| 1991 | 478,555 | 231,223 | 7,488,366 | 263,723 | 1,561,051 | 13,662,067 | 32,172 | 3,847,589 | 843,388 |
| 1992 | 585,072 | 168,251 | 7,076,997 | 317,042 | 622,116 | 12,038,418 | 55,819 | 4,043,878 | 281,864 |
| 1993 | 509,309 | 207,818 | 7,765,751 | 359,632 | 1,708,915 | 15,078,017 | 72,464 | 5,638,325 | 382,195 |
| 1994 | 873,215 | 241,679 | 7,691,548 | 1,220,795 | 1,245,936 | 15,839,195 | 105,373 | 5,139,991 | 617,136 |
| 1995 | 355,198 | 179,930 | 6,994,639 | 842,041 | 746,371 | 15,369,990 | 96,781 | 4,357,648 | 1,308,828 |
| 1996 | 790,618 | 136,397 | 8,590,347 | 889,842 | (78,782) | 15,117,753 | 156,395 | 4,051,744 | 1,001,063 |
| 1997 | 640,177 | 189,241 | 8,138,580 | 1,586,227 | 3,355,446 | 19,415,490 | 177,217 | 4,585,198 | 493,841 |
| 1998 | 297,621 | 115,100 | 8,887,728 | 1,924,868 | 1,134,837 | 22,259,793 | 142,703 | 4,856,225 | 379,997 |
| 1999 | 1,386,051 | 188,209 | 9,396,593 | 2,027,481 | 1,190,817 | 25,075,036 | 189,880 | 5,975,512 | 493,493 |
| 2000 | 971,720 | 163,974 | 9,560,489 | 1,712,002 | 1,521,696 | 19,350,873 | 353,640 | 4,207,518 | 844,558 |
| 2001 | 1,073,777 | 478,164 | 7,671,518 | 1,893,241 | 19,478 | 19,511,317 | 298,329 | 2,427,214 | 1,668,195 |
| 2002 | 1,159,925 | 283,295 | 11,291,076 | 1,698,465 | 945,355 | 18,945,548 | 509,492 | 3,422,236 | 1,254,119 |
| 2003 | 482,320 | 289,438 | 13,523,570 | 2,134,198 | (429,854) | 21,849,854 | 371,352 | 3,845,564 | 558,483 |
| 2004 | 1,069,294 | 423,967 | 10,716,110 | 2,173,932 | 1,114,511 | 21,182,467 | 431,158 | 5,575,933 | 1,254,229 |
| 2005 | 682,398 | 356,259 | 7,678,376 | 2,427,793 | 2,251,492 | 20,200,929 | 453,636 | 5,652,076 | 1,523,835 |
| 2006 | 979,307 | 760,763 | 10,231,120 | 1,939,022 | 629,418 | 24,462,518 | 416,603 | 5,156,892 | 660,132 |
| 2007 | 1,253,512 | 740,539 | 10,142,650 | 3,303,767 | 900,464 | 25,917,081 | 485,004 | 6,915,579 | 891,313 |
| 2008 | 615,938 | 770,923 | 14,594,040 | 2,403,927 | 808,977 | 25,164,874 | 585,698 | 6,555,288 | 665,294 |
| 2009 | 741,732 | 676,657 | 12,994,399 | 3,057,834 | 1,497,191 | 25,295,737 | 690,177 | 7,732,456 | 621,498 |
| 2010 | 690,234 | 599,104 | 16,102,208 | 3,680,877 | 6,035,311 | 33,839,542 | 592,216 | 7,808,082 | 746,193 |
| 2011 | 940,335 | 622,116 | 15,357,592 | 3,120,366 | 2,283,878 | 29,044,015 | 615,130 | 9,287,831 | 772,396 |
| 2012 | 2,468,572 | 868,911 | 17,354,928 | 3,286,105 | 2,365,019 | 33,155,944 | 648,013 | 8,823,701 | 813,598 |
| 2013 | 1,380,044 | 703,678 | 16,434,292 | 3,396,073 | 3,597,017 | 32,333,300 | 624,638 | 8,726,270 | 785,170 |
| 2014 | 1,393,844 | 710,715 | 16,598,635 | 3,430,034 | 3,632,987 | 32,656,632 | 630,884 | 8,813,532 | 793,022 |
| 2015 | 1,407,783 | 717,822 | 16,764,621 | 3,464,335 | 3,669,317 | 32,983,200 | 637,193 | 8,901,668 | 800,952 |
| 2016 | 1,421,861 | 725,000 | 16,932,267 | 3,498,978 | 3,706,010 | 33,313,031 | 643,565 | 8,990,684 | 808,961 |
| 2017 | 1,436,079 | 732,250 | 17,101,590 | 3,533,968 | 3,743,070 | 33,646,161 | 650,000 | 9,080,591 | 817,051 |
| 2018 | 1,450,440 | 739,573 | 17,272,606 | 3,569,307 | 3,780,501 | 33,982,623 | 656,500 | 9,171,397 | 825,222 |
| 2019 | 1,464,944 | 746,968 | 17,445,332 | 3,605,000 | 3,818,306 | 34,322,448 | 663,065 | 9,263,111 | 833,474 |
| 2020 | 1,479,594 | 754,438 | 17,619,785 | 3,641,050 | 3,856,489 | 34,665,673 | 669,696 | 9,355,742 | 841,808 |
| 2021 | 1,494,390 | 761,983 | 17,795,983 | 3,677,461 | 3,895,054 | 35,012,331 | 676,393 | 9,449,300 | 850,227 |
| 2022 | 1,509,334 | 769,602 | 17,973,943 | 3,714,236 | 3,934,005 | 35,362,454 | 683,157 | 9,543,793 | 858,729 |
| 2023 | 1,524,427 | 777,298 | 18,153,682 | 3,751,378 | 3,973,345 | 35,716,079 | 689,988 | 9,639,231 | 867,316 |
| 2024 | 1,539,671 | 785,071 | 18,335,219 | 3,788,892 | 4,013,078 | 36,073,238 | 696,888 | 9,735,623 | 875,989 |
| 2025 | 1,555,068 | 792,922 | 18,518,571 | 3,826,781 | 4,053,209 | 36,433,971 | 703,857 | 9,832,979 | 884,749 |
| 2026 | 1,570,619 | 800,851 | 18,703,757 | 3,865,048 | 4,093,741 | 36,798,311 | 710,896 | 9,931,309 | 893,597 |
| 2027 | 1,586,325 | 808,860 | 18,890,795 | 3,903,699 | 4,134,678 | 37,166,295 | 718,005 | 10,030,622 | 902,533 |
| 2028 | 1,602,188 | 816,948 | 19,079,703 | 3,942,736 | 4,176,025 | 37,537,957 | 725,185 | 10,130,928 | 911,558 |
| 2029 | 1,618,210 | 825,118 | 19,270,500 | 3,982,163 | 4,217,785 | 37,913,337 | 732,437 | 10,232,238 | 920,674 |
| 2030 | 1,634,392 | 833,369 | 19,463,205 | 4,021,985 | 4,259,963 | 38,292,470 | 739,761 | 10,334,560 | 929,880 |
| 2031 | 1,650,736 | 841,703 | 19,657,837 | 4,062,205 | 4,302,563 | 38,675,396 | 747,159 | 10,437,905 | 939,179 |
| 2032 | 1,667,243 | 850,120 | 19,854,415 | 4,102,827 | 4,345,588 | 39,062,149 | 754,630 | 10,542,285 | 948,571 |
| 2033 | 1,683,916 | 858,621 | 20,052,959 | 4,143,855 | 4,389,044 | 39,452,769 | 762,176 | 10,647,707 | 958,057 |
| 2034 | 1,700,755 | 867,207 | 20,253,489 | 4,185,294 | 4,432,935 | 39,847,298 | 769,798 | 10,754,184 | 967,637 |
| 2035 | 1,717,762 | 875,879 | 20,456,024 | 4,227,147 | 4,477,264 | 40,245,770 | 777,496 | 10,861,726 | 977,314 |
| TOTAL | 58,538,386 | 29,029,515 | 719,769,225 | 132,723,987 | 135,605,446 | 1,417,467,660 | 24,209,105 | 378,442,074 | 42,363,727 |

TABLE B-11. Minimum OMP&R Costs of Each Aqueduct Reach to be Reimbursed through Minimum OMP&R Component of Transportation Charge

Sheet 7 of 9

| Calendar Year | CALIFORNIA AQUEDUCT (continued) | | | | | | | | |
|------------------|---------------------------------|-------------|-------------|--|-----------|------------|----------|----------|------------|
| | SANTA ANA DIVISION (continued) | | | SANTA ANA DIVISION - EAST BRANCH EXTENSION | | | | | |
| | Reach 28H | Reach 28J | Subtotal | Reach 1 | Reach 2A | Reach 2B | Reach 2C | Reach 2D | Reach 3A |
| | [56] | [57] | [58] | [59] | [60] | [61] | [62] | [63] | [64] |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1968 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1969 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1970 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1972 | 30 | 0 | 743 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1973 | 79 | 0 | 836,300 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1974 | 34,693 | 854,637 | 1,868,372 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1975 | 69,082 | 723,814 | 1,817,983 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1976 | 100,400 | 635,853 | 2,029,323 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1977 | 92,647 | 825,880 | 2,521,394 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1978 | 68,363 | 835,082 | 2,297,500 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1979 | 92,812 | 265,525 | 1,820,574 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1980 | 129,897 | 1,120,131 | 3,013,554 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1981 | 111,722 | 333,550 | 2,216,431 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1982 | 135,463 | 1,518,759 | 3,708,674 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1983 | 124,651 | 412,806 | 2,464,793 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1984 | 190,924 | 769,068 | 3,537,468 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1985 | 182,242 | 871,492 | 4,230,760 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1986 | 256,526 | 982,332 | 4,477,646 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1987 | 218,717 | 1,118,529 | 4,482,092 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1988 | 200,811 | 1,176,659 | 4,773,787 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1989 | 281,861 | 1,130,035 | 4,864,539 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1990 | 308,144 | 1,538,449 | 5,640,836 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1991 | 632,912 | 1,630,321 | 6,986,382 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1992 | 5,636,464 | 1,102,519 | 11,120,544 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1993 | 570,563 | 994,721 | 7,658,268 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1994 | 415,603 | 1,022,412 | 7,300,515 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1995 | 704,154 | 894,338 | 7,361,749 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1996 | 1,041,697 | 1,316,493 | 7,567,392 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1997 | 949,188 | 953,590 | 7,159,034 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1998 | 991,426 | (67,444) | 6,302,907 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1999 | 1,964,137 | 1,057,137 | 9,680,159 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2000 | 1,004,569 | 1,128,191 | 7,538,476 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 811,163 | 5,715,720 | 10,920,621 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 424,938 | 2,249,179 | 7,859,964 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 381,490 | 1,366,756 | 6,523,645 | 1,022 | 84,351 | 375,154 | 2,329 | 0 | 627,038 |
| 2004 | 447,005 | 3,669,413 | 11,377,738 | 10,740 | 40,841 | 509,089 | 2,039 | 0 | 276,019 |
| 2005 | 686,402 | (1,871,905) | 6,444,044 | 9,849 | 15,079 | 526,273 | 4,153 | 0 | 496,547 |
| 2006 | 329,856 | 5,186,094 | 11,749,577 | 9,240 | 11,378 | 521,499 | 10,436 | 1,597 | 390,883 |
| 2007 | 685,086 | 3,109,621 | 12,066,603 | 179,470 | 15,780 | 1,168,546 | 9,970 | 3,382 | 713,720 |
| 2008 | 678,100 | 4,333,251 | 12,817,631 | 72,890 | 37,718 | 800,816 | 5,509 | (7) | 1,137,885 |
| 2009 | 626,740 | 2,209,034 | 11,879,905 | 73,743 | 27,812 | 891,515 | 5,822 | 0 | 914,239 |
| 2010 | 680,181 | 2,412,908 | 12,239,580 | 114,509 | 35,859 | 980,016 | 7,264 | 1,184 | 954,110 |
| 2011 | 702,856 | 2,699,097 | 14,077,310 | 118,207 | 47,779 | 1,014,880 | 7,552 | 1,235 | 994,593 |
| 2012 | 740,311 | 2,931,460 | 13,957,083 | 124,501 | 32,833 | 1,069,029 | 7,956 | 1,301 | 1,028,050 |
| 2013 | 714,861 | 2,707,967 | 13,558,906 | 120,263 | 39,212 | 1,031,521 | 7,667 | 1,252 | 1,002,174 |
| 2014 | 722,009 | 2,735,046 | 13,694,493 | 121,465 | 39,604 | 1,041,836 | 7,744 | 1,265 | 1,012,195 |
| 2015 | 729,230 | 2,762,397 | 13,831,440 | 122,680 | 40,000 | 1,052,255 | 7,821 | 1,278 | 1,022,317 |
| 2016 | 736,522 | 2,790,021 | 13,969,753 | 123,907 | 40,400 | 1,062,777 | 7,899 | 1,290 | 1,032,540 |
| 2017 | 743,887 | 2,817,921 | 14,109,450 | 125,146 | 40,804 | 1,073,405 | 7,978 | 1,303 | 1,042,866 |
| 2018 | 751,326 | 2,846,100 | 14,250,545 | 126,397 | 41,212 | 1,084,139 | 8,058 | 1,316 | 1,053,294 |
| 2019 | 758,839 | 2,874,561 | 14,393,050 | 127,661 | 41,625 | 1,094,980 | 8,139 | 1,329 | 1,063,827 |
| 2020 | 766,428 | 2,903,307 | 14,536,981 | 128,938 | 42,041 | 1,105,930 | 8,220 | 1,343 | 1,074,466 |
| 2021 | 774,092 | 2,932,340 | 14,682,352 | 130,227 | 42,461 | 1,116,990 | 8,302 | 1,356 | 1,085,210 |
| 2022 | 781,833 | 2,961,663 | 14,829,175 | 131,530 | 42,886 | 1,128,159 | 8,385 | 1,370 | 1,096,062 |
| 2023 | 789,651 | 2,991,280 | 14,977,466 | 132,845 | 43,315 | 1,139,441 | 8,469 | 1,383 | 1,107,023 |
| 2024 | 797,548 | 3,021,193 | 15,127,241 | 134,173 | 43,748 | 1,150,835 | 8,554 | 1,397 | 1,118,093 |
| 2025 | 805,523 | 3,051,404 | 15,278,512 | 135,515 | 44,185 | 1,162,344 | 8,639 | 1,411 | 1,129,274 |
| 2026 | 813,578 | 3,081,919 | 15,431,299 | 136,870 | 44,627 | 1,173,967 | 8,726 | 1,425 | 1,140,567 |
| 2027 | 821,714 | 3,112,738 | 15,585,612 | 138,239 | 45,073 | 1,185,707 | 8,813 | 1,440 | 1,151,973 |
| 2028 | 829,931 | 3,143,865 | 15,741,467 | 139,621 | 45,524 | 1,197,564 | 8,901 | 1,454 | 1,163,492 |
| 2029 | 838,231 | 3,175,304 | 15,898,884 | 141,017 | 45,979 | 1,209,540 | 8,990 | 1,469 | 1,175,127 |
| 2030 | 846,613 | 3,207,057 | 16,057,871 | 142,428 | 46,439 | 1,221,635 | 9,080 | 1,483 | 1,186,879 |
| 2031 | 855,079 | 3,239,127 | 16,218,449 | 143,852 | 46,904 | 1,233,851 | 9,171 | 1,498 | 1,198,747 |
| 2032 | 863,630 | 3,271,519 | 16,380,635 | 145,290 | 47,373 | 1,246,190 | 9,262 | 1,513 | 1,210,735 |
| 2033 | 872,266 | 3,304,234 | 16,544,440 | 146,743 | 47,846 | 1,258,652 | 9,355 | 1,528 | 1,222,842 |
| 2034 | 880,989 | 3,337,276 | 16,709,884 | 148,211 | 48,325 | 1,271,238 | 9,449 | 1,543 | 1,235,071 |
| 2035 | 889,799 | 3,370,649 | 16,876,984 | 149,693 | 48,808 | 1,283,951 | 9,543 | 1,559 | 1,247,421 |
| TOTAL | 42,087,484 | 128,794,395 | 615,896,785 | 3,806,882 | 1,357,821 | 34,381,724 | 260,195 | 40,897 | 33,305,279 |

TABLE B-11. Minimum OMP&R Costs of Each Aqueduct Reach to be Reimbursed through Minimum OMP&R Component of Transportation Charge

(in dollars)

Sheet 8 of 9

| Calendar | CALIFORNIA AQUEDUCT (continued) | | | | | | | | | | |
|----------|---|-----------|-----------|------------|-------------|------------|-------------|-------------|------------|-------------|---------------|
| | SANTA ANA DIVISION - EAST BRANCH EXTENSION (cont) | | | | WEST BRANCH | | | | | | |
| | Reach 3B | Reach 4A | Reach 4B | Subtotal | Reach 29A | Reach 29F | Reach 29G | Reach 29H | Reach 29J | Reach 30 | Subtotal |
| Year | [65] | [66] | [67] | [68] | [69] | [70] | [71] | [72] | [73] | [74] | [75] |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1968 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1969 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1970 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1972 | 0 | 0 | 0 | 0 | 719,255 | 159,249 | 199,145 | 234,196 | 88,198 | 420,789 | 1,820,832 |
| 1973 | 0 | 0 | 0 | 0 | 779,949 | 339,363 | 122,664 | 264,850 | 119,743 | 621,431 | 2,248,000 |
| 1974 | 0 | 0 | 0 | 0 | 883,312 | 158,366 | 112,458 | 350,160 | (4,525) | 723,949 | 2,223,720 |
| 1975 | 0 | 0 | 0 | 0 | 1,049,990 | 176,676 | 194,724 | 801,457 | 75,870 | 841,991 | 3,140,708 |
| 1976 | 0 | 0 | 0 | 0 | 1,220,429 | 215,588 | 202,591 | 624,614 | 98,268 | (650,944) | 1,710,546 |
| 1977 | 0 | 0 | 0 | 0 | 1,268,813 | 116,939 | 218,129 | 684,679 | 184 | 634,581 | 2,923,325 |
| 1978 | 0 | 0 | 0 | 0 | 1,174,708 | 342,479 | 267,308 | 415,641 | 17,764 | 3,088,954 | 5,306,854 |
| 1979 | 0 | 0 | 0 | 0 | 1,366,942 | 285,575 | 284,188 | 972,584 | 29,850 | 958,068 | 3,897,207 |
| 1980 | 0 | 0 | 0 | 0 | 1,698,215 | 224,472 | 455,619 | 874,259 | 288,303 | 222,549 | 3,763,417 |
| 1981 | 0 | 0 | 0 | 0 | 1,783,405 | 123,264 | 615,047 | 2,305,110 | 8,794 | 1,093,897 | 5,929,517 |
| 1982 | 0 | 0 | 0 | 0 | 1,919,979 | 190,500 | 702,265 | 2,208,264 | 414,230 | 978,624 | 6,413,862 |
| 1983 | 0 | 0 | 0 | 0 | 2,739,814 | 149,333 | 888,475 | 745,939 | 579,882 | 3,698,681 | 8,802,124 |
| 1984 | 0 | 0 | 0 | 0 | 3,463,038 | 81,260 | 2,358,495 | 537,207 | 719,282 | 755,136 | 7,914,418 |
| 1985 | 0 | 0 | 0 | 0 | 3,866,946 | 295,836 | 3,047,591 | 975,729 | 614,735 | 1,753,355 | 10,554,192 |
| 1986 | 0 | 0 | 0 | 0 | 3,791,427 | 457,604 | 2,893,171 | 1,480,015 | 1,032,216 | 1,338,657 | 10,993,090 |
| 1987 | 0 | 0 | 0 | 0 | 3,423,494 | 213,106 | 2,933,342 | 944,604 | 459,398 | 1,406,519 | 9,380,463 |
| 1988 | 0 | 0 | 0 | 0 | 3,447,403 | 255,113 | 3,017,463 | 883,714 | 446,468 | 1,452,589 | 9,502,750 |
| 1989 | 0 | 0 | 0 | 0 | 4,025,641 | 405,583 | 2,738,143 | 1,398,165 | 865,738 | 1,505,029 | 10,938,299 |
| 1990 | 0 | 0 | 0 | 0 | 4,088,481 | 383,655 | 3,232,445 | 3,153,869 | 777,713 | 847,500 | 12,483,663 |
| 1991 | 0 | 0 | 0 | 0 | 3,862,056 | 304,143 | 3,550,063 | 639,527 | 763,037 | 1,191,090 | 10,309,916 |
| 1992 | 0 | 0 | 0 | 0 | 4,286,050 | 327,802 | 3,892,480 | 1,014,551 | 872,953 | 2,259,032 | 12,652,868 |
| 1993 | 0 | 0 | 0 | 0 | 3,969,075 | 343,304 | 4,515,385 | 1,670,952 | 852,208 | 1,157,876 | 12,508,800 |
| 1994 | 0 | 0 | 0 | 0 | 3,649,861 | 293,376 | 3,359,381 | 1,879,417 | 872,624 | 1,674,576 | 11,729,235 |
| 1995 | 0 | 0 | 0 | 0 | 4,137,046 | 883,315 | 4,750,275 | 1,588,080 | 754,904 | (421,879) | 11,691,741 |
| 1996 | 0 | 0 | 0 | 0 | 4,511,858 | 966,044 | 3,593,671 | 4,208,195 | 877,111 | 1,574,098 | 15,730,977 |
| 1997 | 0 | 0 | 0 | 0 | 4,543,506 | 1,030,809 | 2,429,066 | 3,755,901 | 1,597,361 | 1,521,491 | 14,878,134 |
| 1998 | 0 | 0 | 0 | 0 | 4,871,761 | 464,376 | 3,473,405 | 2,398,630 | 1,996,114 | 1,291,185 | 14,495,471 |
| 1999 | 0 | 0 | 0 | 0 | 4,786,456 | 4,240,162 | 4,924,176 | 1,742,086 | 1,000,370 | 1,879,688 | 18,572,938 |
| 2000 | 0 | 0 | 0 | 0 | 5,460,091 | 779,382 | 4,278,318 | 2,322,884 | 171,261 | 1,536,148 | 14,548,084 |
| 2001 | 0 | 0 | 0 | 0 | 5,909,652 | 1,538,840 | 5,138,146 | 4,409,355 | 240,853 | (962,356) | 16,274,490 |
| 2002 | 0 | 0 | 0 | 0 | 5,354,676 | 1,492,709 | 4,093,563 | 4,485,776 | (47,277) | 3,477,740 | 18,857,187 |
| 2003 | 360 | 93,305 | 33,614 | 1,217,173 | 4,589,122 | 1,324,752 | 3,837,649 | 3,400,901 | (581,707) | 975,166 | 13,545,883 |
| 2004 | 337 | 13,434 | 71,444 | 923,943 | 9,074,429 | 1,387,491 | 3,621,192 | 5,176,142 | (560,712) | 1,534,944 | 20,233,486 |
| 2005 | 9,036 | 27,330 | 216,418 | 1,304,685 | 5,811,622 | 2,601,819 | 7,429,180 | (576,194) | 2,664,715 | (1,233,565) | 16,697,577 |
| 2006 | 322 | 21,081 | 63,589 | 1,030,025 | 6,947,154 | 2,329,626 | 5,163,209 | 3,621,734 | 909,987 | (4,210,080) | 14,761,630 |
| 2007 | 81,043 | 54,525 | 183,948 | 2,408,384 | 6,835,179 | 3,005,480 | 11,479,057 | 7,416,459 | 902,782 | 12,080,014 | 41,718,971 |
| 2008 | 80,904 | 102,892 | 197,967 | 2,436,574 | 8,187,030 | 709,737 | 17,159,405 | 7,745,079 | 141,021 | 683,368 | 34,625,640 |
| 2009 | 48,560 | 132,594 | 190,373 | 2,284,658 | 7,856,739 | 868,270 | 9,052,321 | 6,141,926 | 609,057 | 2,583,136 | 27,111,449 |
| 2010 | 73,288 | 98,232 | 198,400 | 2,462,862 | 7,663,391 | 1,173,224 | 8,408,633 | 4,456,451 | 533,095 | 6,057,579 | 28,292,373 |
| 2011 | 75,158 | 101,165 | 205,820 | 2,566,389 | 8,036,042 | 1,379,651 | 7,713,693 | 5,225,202 | 552,280 | 3,416,658 | 26,323,526 |
| 2012 | 79,145 | 106,545 | 213,821 | 2,663,181 | 8,168,134 | 1,283,294 | 7,720,414 | 5,437,501 | 581,754 | 3,528,392 | 26,719,489 |
| 2013 | 76,623 | 103,001 | 208,074 | 2,589,787 | 8,035,415 | 1,291,510 | 8,027,056 | 5,090,115 | 561,267 | 4,377,552 | 27,382,915 |
| 2014 | 77,389 | 104,031 | 210,155 | 2,615,684 | 8,115,769 | 1,304,425 | 8,107,326 | 5,141,016 | 566,880 | 4,421,328 | 27,656,744 |
| 2015 | 78,163 | 105,071 | 212,256 | 2,641,841 | 8,196,926 | 1,317,470 | 8,188,400 | 5,192,426 | 572,549 | 4,465,541 | 27,933,312 |
| 2016 | 78,944 | 106,122 | 214,379 | 2,668,258 | 8,278,896 | 1,330,644 | 8,270,284 | 5,244,351 | 578,274 | 4,510,196 | 28,212,645 |
| 2017 | 79,734 | 107,183 | 216,523 | 2,694,942 | 8,361,685 | 1,343,951 | 8,352,986 | 5,296,794 | 584,057 | 4,555,298 | 28,494,771 |
| 2018 | 80,531 | 108,255 | 218,688 | 2,721,890 | 8,445,301 | 1,357,390 | 8,436,516 | 5,349,762 | 589,897 | 4,600,851 | 28,779,717 |
| 2019 | 81,336 | 109,337 | 220,875 | 2,749,109 | 8,529,754 | 1,370,964 | 8,520,881 | 5,403,260 | 595,796 | 4,646,860 | 29,067,515 |
| 2020 | 82,150 | 110,431 | 223,084 | 2,776,603 | 8,615,052 | 1,384,674 | 8,606,090 | 5,457,292 | 601,754 | 4,693,328 | 29,358,190 |
| 2021 | 82,971 | 111,535 | 225,314 | 2,804,366 | 8,701,203 | 1,398,521 | 8,692,151 | 5,511,865 | 607,772 | 4,740,262 | 29,651,774 |
| 2022 | 83,801 | 112,650 | 227,568 | 2,832,411 | 8,788,215 | 1,412,506 | 8,779,073 | 5,566,984 | 613,850 | 4,787,664 | 29,948,292 |
| 2023 | 84,639 | 113,777 | 229,843 | 2,860,735 | 8,876,097 | 1,426,631 | 8,866,863 | 5,622,654 | 619,988 | 4,835,541 | 30,247,774 |
| 2024 | 85,485 | 114,915 | 232,142 | 2,889,342 | 8,964,858 | 1,440,897 | 8,955,532 | 5,678,880 | 626,188 | 4,883,896 | 30,550,251 |
| 2025 | 86,340 | 116,064 | 234,463 | 2,918,235 | 9,054,506 | 1,455,306 | 9,045,087 | 5,735,669 | 632,450 | 4,932,735 | 30,855,753 |
| 2026 | 87,204 | 117,225 | 236,808 | 2,947,419 | 9,145,051 | 1,469,859 | 9,135,538 | 5,793,026 | 638,774 | 4,982,063 | 31,164,311 |
| 2027 | 88,076 | 118,397 | 239,176 | 2,976,894 | 9,236,502 | 1,484,558 | 9,226,894 | 5,850,956 | 645,162 | 5,031,883 | 31,475,955 |
| 2028 | 88,957 | 119,581 | 241,568 | 3,006,662 | 9,328,867 | 1,499,403 | 9,319,163 | 5,909,466 | 651,614 | 5,082,202 | 31,790,715 |
| 2029 | 89,846 | 120,777 | 243,983 | 3,036,728 | 9,422,156 | 1,514,397 | 9,412,354 | 5,968,560 | 658,130 | 5,133,024 | 32,108,621 |
| 2030 | 90,745 | 121,984 | 246,423 | 3,067,096 | 9,516,377 | 1,529,541 | 9,506,478 | 6,028,246 | 664,711 | 5,184,354 | 32,429,707 |
| 2031 | 91,652 | 123,204 | 248,887 | 3,097,766 | 9,611,541 | 1,544,837 | 9,601,543 | 6,088,528 | 671,358 | 5,236,198 | 32,754,005 |
| 2032 | 92,568 | 124,436 | 251,376 | 3,128,743 | 9,707,656 | 1,560,285 | 9,697,558 | 6,149,414 | 678,072 | 5,288,560 | 33,081,545 |
| 2033 | 93,494 | 125,681 | 253,890 | 3,160,031 | 9,804,733 | 1,575,888 | 9,794,534 | 6,210,908 | 684,853 | 5,341,445 | 33,412,361 |
| 2034 | 94,429 | 126,937 | 256,429 | 3,191,632 | 9,902,780 | 1,591,647 | 9,892,479 | 6,273,017 | 691,701 | 5,394,860 | 33,746,484 |
| 2035 | 95,373 | 128,207 | 258,993 | 3,223,548 | 10,001,808 | 1,607,563 | 9,991,404 | 6,335,747 | 698,618 | 5,448,809 | 34,083,949 |
| TOTAL | 2,418,603 | 3,399,904 | 6,926,291 | 85,897,596 | 377,863,319 | 66,514,434 | 360,492,135 | 228,914,547 | 36,769,617 | 175,860,106 | 1,246,414,158 |

TABLE B-11. Minimum OMP&R Costs of Each Aqueduct Reach to be Reimbursed through Minimum OMP&R Component of Transportation Charge

Sheet 9 of 9

| Calendar Year | CALIFORNIA AQUEDUCT (continued) | | | | | | | GRAND TOTAL |
|----------------------|---------------------------------|-------------|-----------|-----------|-----------|-------------|---------------|--------------------|
| | COASTAL BRANCH | | | | | | Total | |
| | Reach 31A (a) | Reach 33A | Reach 33B | Reach 34 | Reach 35 | Subtotal | | |
| | [76] | [77] | [78] | [79] | [80] | [81] | [82] | [83] |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 42,918 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 168,358 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 184,729 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 378,874 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 408,397 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 634,505 |
| 1968 | 0 | 0 | 0 | 0 | 0 | 0 | 2,160,548 | 2,745,160 |
| 1969 | 509,728 | 0 | 0 | 0 | 0 | 509,728 | 3,324,718 | 4,074,939 |
| 1970 | 609,988 | 0 | 0 | 0 | 0 | 609,988 | 3,983,062 | 4,676,282 |
| 1971 | 699,052 | 0 | 0 | 0 | 0 | 699,052 | 5,614,013 | 6,185,714 |
| 1972 | 697,576 | 0 | 0 | 0 | 0 | 697,576 | 12,353,356 | 12,998,869 |
| 1973 | 641,626 | 0 | 0 | 0 | 0 | 641,626 | 14,590,688 | 15,194,233 |
| 1974 | 669,279 | 0 | 0 | 0 | 0 | 669,279 | 16,598,762 | 17,372,561 |
| 1975 | 806,429 | 0 | 0 | 0 | 0 | 806,429 | 19,569,999 | 20,517,423 |
| 1976 | 840,927 | 0 | 0 | 0 | 0 | 840,927 | 19,002,859 | 20,027,213 |
| 1977 | 872,169 | 0 | 0 | 0 | 0 | 872,169 | 23,267,885 | 24,213,489 |
| 1978 | 934,119 | 0 | 0 | 0 | 0 | 934,119 | 24,818,739 | 26,012,786 |
| 1979 | 871,688 | 0 | 0 | 0 | 0 | 871,688 | 23,421,881 | 24,675,598 |
| 1980 | 1,047,396 | 4,790 | 0 | 30 | 75 | 1,052,291 | 30,105,348 | 32,038,398 |
| 1981 | 1,037,469 | 4,790 | 0 | 30 | 75 | 1,042,364 | 33,884,524 | 35,516,366 |
| 1982 | 1,015,555 | 4,790 | 0 | 30 | 75 | 1,020,450 | 39,515,188 | 41,611,655 |
| 1983 | 1,146,269 | 4,957 | 0 | 30 | 77 | 1,151,333 | 54,543,263 | 56,802,781 |
| 1984 | 1,427,192 | 5,051 | 0 | 31 | 78 | 1,432,352 | 63,947,633 | 67,105,188 |
| 1985 | 1,849,827 | 5,051 | 0 | 31 | 78 | 1,854,987 | 69,700,009 | 73,272,898 |
| 1986 | 1,714,723 | 5,051 | 0 | 31 | 78 | 1,719,883 | 73,437,761 | 76,707,917 |
| 1987 | 1,689,141 | 4,324 | 0 | 26 | 67 | 1,693,558 | 71,443,424 | 75,217,576 |
| 1988 | 1,964,428 | 4,509 | 0 | 28 | 70 | 1,969,035 | 72,349,117 | 76,060,618 |
| 1989 | 1,768,942 | 4,509 | 0 | 28 | 70 | 1,773,549 | 73,894,076 | 78,662,348 |
| 1990 | 2,274,772 | 0 | 0 | 0 | 0 | 2,274,772 | 86,130,115 | 91,361,385 |
| 1991 | 2,187,841 | 0 | 0 | 0 | 0 | 2,187,841 | 86,877,284 | 90,982,870 |
| 1992 | 2,465,364 | 0 | 0 | 0 | 0 | 2,465,364 | 94,167,321 | 99,235,524 |
| 1993 | 2,811,441 | 0 | 0 | 0 | 0 | 2,811,441 | 100,019,568 | 107,299,130 |
| 1994 | 3,894,639 | 0 | 0 | 0 | 0 | 3,894,639 | 92,336,811 | 99,944,106 |
| 1995 | 3,481,049 | 0 | 0 | 0 | 0 | 3,481,049 | 98,887,435 | 105,659,504 |
| 1996 | 5,144,684 | 0 | 0 | 0 | 0 | 5,144,684 | 105,119,193 | 112,018,784 |
| 1997 | 2,523,741 | (33) | 0 | 0 | 0 | 2,523,708 | 107,647,058 | 113,385,326 |
| 1998 | 4,302,712 | 1,878,365 | 1,386 | 160,400 | 88,026 | 6,430,889 | 120,649,996 | 127,316,519 |
| 1999 | 4,191,336 | 1,957,943 | 16,646 | 184,325 | 87,373 | 6,437,623 | 125,175,623 | 134,349,896 |
| 2000 | 2,887,985 | 2,533,780 | 20,786 | 253,538 | 109,328 | 5,805,417 | 122,221,537 | 130,880,692 |
| 2001 | 3,116,655 | 2,241,988 | 14,426 | 153,879 | 58,875 | 5,585,823 | 136,021,126 | 143,373,424 |
| 2002 | 3,189,046 | 2,690,065 | 49,511 | 189,457 | 81,857 | 6,199,936 | 125,433,690 | 137,079,974 |
| 2003 | 3,368,315 | 2,817,399 | 44,211 | 200,986 | 85,015 | 6,515,926 | 128,160,373 | 137,164,934 |
| 2004 | 3,578,663 | 2,717,349 | 69,895 | 240,426 | 109,830 | 6,716,163 | 146,907,047 | 157,106,356 |
| 2005 | 3,854,179 | 2,991,661 | 120,379 | 292,354 | 137,878 | 7,396,451 | 123,114,877 | 131,236,088 |
| 2006 | 2,667,120 | 3,535,439 | 110,280 | 310,123 | 155,148 | 6,778,110 | 131,102,276 | 138,823,560 |
| 2007 | 3,620,982 | 4,339,725 | 128,889 | 357,583 | 178,833 | 8,626,012 | 162,629,431 | 172,969,075 |
| 2008 | 5,728,701 | 5,521,603 | 158,215 | 463,815 | 220,243 | 12,092,577 | 183,981,087 | 193,619,930 |
| 2009 | 5,497,068 | 5,467,017 | 133,385 | 492,758 | 226,472 | 11,816,700 | 164,039,234 | 173,399,691 |
| 2010 | 5,769,330 | 5,261,280 | 0 | 0 | 0 | 11,030,610 | 182,445,228 | 192,281,768 |
| 2011 | 5,499,929 | 5,502,216 | 0 | 0 | 0 | 11,002,145 | 185,278,574 | 196,677,396 |
| 2012 | 5,207,310 | 5,692,050 | 0 | 0 | 0 | 10,899,360 | 190,465,382 | 201,825,182 |
| 2013 | 5,547,112 | 5,540,034 | 0 | 0 | 0 | 11,087,146 | 187,923,697 | 198,897,402 |
| 2014 | 5,602,583 | 5,595,434 | 0 | 0 | 0 | 11,198,017 | 189,802,932 | 200,886,375 |
| 2015 | 5,658,609 | 5,651,388 | 0 | 0 | 0 | 11,309,997 | 191,700,969 | 202,895,246 |
| 2016 | 5,715,195 | 5,707,902 | 0 | 0 | 0 | 11,423,097 | 193,617,970 | 204,924,190 |
| 2017 | 5,772,347 | 5,764,981 | 0 | 0 | 0 | 11,537,328 | 195,554,152 | 206,973,433 |
| 2018 | 5,830,070 | 5,822,631 | 0 | 0 | 0 | 11,652,701 | 197,509,690 | 209,043,164 |
| 2019 | 5,888,371 | 5,880,858 | 0 | 0 | 0 | 11,769,229 | 199,484,785 | 211,133,593 |
| 2020 | 5,947,255 | 5,939,666 | 0 | 0 | 0 | 11,886,921 | 201,479,638 | 213,244,935 |
| 2021 | 6,006,727 | 5,999,063 | 0 | 0 | 0 | 12,005,790 | 203,494,435 | 215,377,383 |
| 2022 | 6,066,795 | 6,059,053 | 0 | 0 | 0 | 12,125,848 | 205,529,379 | 217,531,158 |
| 2023 | 6,127,463 | 6,119,644 | 0 | 0 | 0 | 12,247,107 | 207,584,673 | 219,706,470 |
| 2024 | 6,188,737 | 6,180,840 | 0 | 0 | 0 | 12,369,577 | 209,660,517 | 221,903,530 |
| 2025 | 6,250,625 | 6,242,649 | 0 | 0 | 0 | 12,493,274 | 211,757,118 | 224,122,562 |
| 2026 | 6,313,131 | 6,305,075 | 0 | 0 | 0 | 12,618,206 | 213,874,696 | 226,363,795 |
| 2027 | 6,376,262 | 6,368,126 | 0 | 0 | 0 | 12,744,388 | 216,013,444 | 228,627,436 |
| 2028 | 6,440,025 | 6,431,807 | 0 | 0 | 0 | 12,871,832 | 218,173,579 | 230,913,708 |
| 2029 | 6,504,425 | 6,496,125 | 0 | 0 | 0 | 13,000,550 | 220,355,315 | 233,222,847 |
| 2030 | 6,569,469 | 6,561,087 | 0 | 0 | 0 | 13,130,556 | 222,558,867 | 235,555,072 |
| 2031 | 6,635,164 | 6,626,697 | 0 | 0 | 0 | 13,261,861 | 224,784,455 | 237,910,623 |
| 2032 | 6,701,516 | 6,692,964 | 0 | 0 | 0 | 13,394,480 | 227,032,300 | 240,289,730 |
| 2033 | 6,768,531 | 6,759,894 | 0 | 0 | 0 | 13,528,425 | 229,302,619 | 242,692,624 |
| 2034 | 6,836,216 | 6,827,493 | 0 | 0 | 0 | 13,663,709 | 231,595,648 | 245,119,553 |
| 2035 | 6,904,578 | 6,895,768 | 0 | 0 | 0 | 13,800,346 | 233,911,606 | 247,570,751 |
| TOTAL | 252,727,591 | 197,664,848 | 868,009 | 3,299,939 | 1,539,621 | 456,100,008 | 8,583,039,603 | 9,096,404,487 |

(a) Includes certain costs to be assigned directly to Kern County Water Agency. Refer to Appendix B text discussion of Table B-16A under "Project Water Charges."

Tables B-12 through B-31

Note: Where applicable, the projected data values shown in this appendix are shaded and the bill year data are in **bold** type.

**TABLE B-12. Variable OMP&R Costs to be Reimbursed through
Variable OMP&R Component of Transportation Charge^a**

(in dollars)

Sheet 1 of 4

| Calendar Year | NORTH BAY AQUEDUCT | | | | SOUTH BAY AQUEDUCT | CALIFORNIA AQUEDUCT | | |
|------------------|--------------------------------------|--|--|------------|---|---------------------------|--------------------------------|------------------------------------|
| | Reach 1 | Reach 3A | Reach 3B | Total | Reach 1 | Reach 1 | Reach 4 | Reach 14A |
| | Barker Slough Pumping Plant | Cordelia Pumping Plant (Solano) | Cordelia Pumping Plant (Napa) (b) | | South Bay & Del Valle Pumping Plants (c) | Banks Pumping Plant | Dos Amigos Pumping Plant | Buena Vista Pumping Plant |
| | [1] | [2] | [3] | [4] | [5] | [6] | [7] | [8] |
| 1962 | 0 | 0 | 0 | 0 | 36,970 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 57,711 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 74,134 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 142,609 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 192,605 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 0 | 223,117 | 13,881 | 0 | 0 |
| 1968 | 0 | 0 | 6,989 | 6,989 | 336,671 | 452,630 | 202,947 | 0 |
| 1969 | 0 | 0 | 8,551 | 8,551 | 257,579 | 293,741 | 135,425 | 0 |
| 1970 | 0 | 0 | 13,598 | 13,598 | 396,358 | 346,215 | 211,197 | 1 |
| 1971 | 0 | 0 | 10,609 | 10,609 | 381,662 | 574,015 | 225,188 | 138,001 |
| 1972 | 0 | 0 | 14,434 | 14,434 | 598,702 | 933,292 | 502,196 | 241,714 |
| 1973 | 0 | 0 | 14,449 | 14,449 | 493,490 | 688,030 | 381,232 | 306,268 |
| 1974 | 0 | 0 | 17,473 | 17,473 | 565,575 | 783,562 | 447,772 | 358,739 |
| 1975 | 0 | 0 | 14,779 | 14,779 | 349,758 | 1,341,019 | 518,816 | 550,860 |
| 1976 | 0 | 0 | 20,856 | 20,856 | 571,361 | 1,638,453 | 641,115 | 755,747 |
| 1977 | 0 | 0 | 22,635 | 22,635 | 512,996 | 1,013,307 | 284,828 | 298,300 |
| 1978 | 0 | 0 | 21,692 | 21,692 | 586,355 | 2,339,502 | 607,042 | 732,036 |
| 1979 | 0 | 0 | 16,237 | 16,237 | 605,136 | 3,554,256 | 1,008,564 | 818,816 |
| 1980 | 0 | 0 | 19,945 | 19,945 | 523,369 | 2,083,336 | 1,129,152 | 1,051,629 |
| 1981 | 0 | 0 | 23,842 | 23,842 | 567,692 | 3,952,931 | 1,939,189 | 1,336,867 |
| 1982 | 0 | 0 | 12,157 | 12,157 | 605,780 | 3,082,031 | 1,363,705 | 1,200,226 |
| 1983 | 0 | 0 | 2,342 | 2,342 | 82,222 | 879,916 | 343,597 | 341,584 |
| 1984 | 0 | 0 | 4,822 | 4,822 | 271,543 | 1,695,568 | 885,941 | 678,307 |
| 1985 | 0 | 0 | 10,188 | 10,188 | 451,020 | 3,171,920 | 1,613,745 | 1,397,490 |
| 1986 | 0 | 0 | 15,501 | 15,501 | 807,984 | 6,601,752 | 2,627,407 | 2,405,224 |
| 1987 | 0 | 0 | 27,223 | 27,223 | 886,956 | 5,753,132 | 2,523,544 | 2,240,552 |
| 1988 | 17,813 | 0 | 24,020 | 41,833 | 909,300 | 6,280,898 | 2,611,297 | 2,562,330 |
| 1989 | 29,819 | 43,846 | 26,519 | 100,184 | 1,161,160 | 9,748,180 | 3,910,492 | 3,964,188 |
| 1990 | 52,210 | 67,109 | 40,775 | 160,094 | 1,834,626 | 10,467,177 | 4,501,309 | 5,785,069 |
| 1991 | 10,429 | 10,118 | 5,252 | 25,799 | 378,966 | 1,923,595 | 490,766 | 903,923 |
| 1992 | 13,319 | 13,070 | 9,406 | 35,795 | 311,251 | 3,211,086 | 1,168,304 | 1,255,567 |
| 1993 | (11,941) | (8,753) | (5,392) | (26,086) | (158,214) | 532,899 | 345,215 | (124,821) |
| 1994 | 46,538 | 39,910 | 29,105 | 115,553 | 799,370 | 5,658,038 | 2,298,300 | 2,504,629 |
| 1995 | 20,014 | 20,620 | 11,791 | 52,425 | 247,645 | 4,017,881 | 1,513,362 | 919,965 |
| 1996 | 57,320 | 47,288 | 23,483 | 128,091 | 718,807 | 8,112,547 | 3,969,388 | 2,430,979 |
| 1997 | 67,416 | 52,935 | 21,955 | 142,306 | 1,038,568 | 6,900,694 | 2,845,506 | 2,589,077 |
| 1998 | (11,427) | (10,141) | (4,879) | (26,447) | (133,721) | 204,374 | (365,361) | (319,014) |
| 1999 | 31,419 | 25,288 | 11,623 | 68,330 | 400,593 | 6,766,513 | 2,313,698 | 1,592,645 |
| 2000 | 56,973 | 41,371 | 14,664 | 113,008 | 836,925 | 7,839,033 | 2,959,329 | 2,881,364 |
| 2001 | 360,477 | 250,132 | 214,039 | 824,648 | 4,067,565 | 24,118,913 | 9,876,725 | 14,856,647 |
| 2002 | 190,460 | 104,564 | 61,470 | 356,494 | 2,239,168 | 17,118,323 | 6,897,786 | 8,429,779 |
| 2003 | 181,018 | 118,373 | 97,750 | 397,141 | 2,559,320 | 21,476,359 | 9,022,423 | 10,661,035 |
| 2004 | 250,864 | 138,880 | 106,974 | 496,718 | 2,495,789 | 21,615,089 | 9,327,921 | 12,302,422 |
| 2005 | 284,272 | 147,306 | 148,650 | 580,228 | 2,796,883 | 29,632,779 | 13,071,930 | 12,651,476 |
| 2006 | 227,603 | 111,602 | 144,301 | 483,506 | 2,631,070 | 23,529,414 | 10,518,677 | 11,632,670 |
| 2007 | 444,015 | 223,159 | 253,769 | 920,943 | 4,189,917 | 24,809,324 | 10,741,787 | 15,934,913 |
| 2008 | 404,510 | 185,066 | 290,745 | 880,321 | 3,203,194 | 16,762,595 | 5,882,547 | 10,840,733 |
| 2009 | 239,665 | 105,994 | 185,186 | 530,845 | 2,723,424 | 9,431,296 | 4,553,201 | 7,623,203 |
| 2010 | 708,093 | 348,467 | 930,250 | 1,986,810 | 3,642,253 | 22,071,379 | 7,551,885 | 9,050,798 |
| 2011 | 916,693 | 538,817 | 1,162,581 | 2,618,091 | 6,056,629 | 32,184,385 | 17,293,860 | 22,062,196 |
| 2012 | 757,502 | 441,900 | 967,846 | 2,167,248 | 5,260,852 | 37,199,225 | 14,114,562 | 18,437,942 |
| 2013 | 363,459 | 214,484 | 414,634 | 992,577 | 3,497,932 | 31,266,607 | 16,382,230 | 19,434,989 |
| 2014 | 373,660 | 234,712 | 414,634 | 1,023,006 | 3,521,661 | 35,257,602 | 17,264,303 | 20,966,860 |
| 2015 | 598,837 | 265,905 | 659,088 | 1,523,830 | 5,590,602 | 38,349,896 | 19,149,697 | 23,975,686 |
| 2016 | 598,837 | 265,905 | 659,088 | 1,523,830 | 5,590,602 | 38,800,597 | 19,612,481 | 24,781,693 |
| 2017 | 598,837 | 265,905 | 659,088 | 1,523,830 | 5,590,602 | 36,451,786 | 18,770,875 | 23,317,841 |
| 2018 | 598,837 | 265,905 | 659,088 | 1,523,830 | 5,590,602 | 42,337,868 | 19,993,953 | 25,452,906 |
| 2019 | 598,837 | 265,905 | 659,088 | 1,523,830 | 5,590,602 | 38,724,511 | 19,350,818 | 24,324,995 |
| 2020 | 598,837 | 265,905 | 659,088 | 1,523,830 | 5,590,602 | 37,873,896 | 19,565,382 | 24,734,204 |
| 2021 | 598,873 | 265,905 | 659,195 | 1,523,973 | 5,590,602 | 39,143,525 | 19,541,485 | 24,692,525 |
| 2022 | 598,873 | 265,905 | 659,195 | 1,523,973 | 5,590,602 | 38,697,828 | 19,600,009 | 24,794,080 |
| 2023 | 598,873 | 265,905 | 659,195 | 1,523,973 | 5,590,602 | 39,783,938 | 19,718,470 | 25,000,838 |
| 2024 | 598,873 | 265,905 | 659,195 | 1,523,973 | 5,590,602 | 37,489,516 | 19,557,912 | 24,719,798 |
| 2025 | 598,873 | 265,905 | 659,195 | 1,523,973 | 5,590,602 | 39,461,783 | 19,661,900 | 24,901,023 |
| 2026 | 598,873 | 265,905 | 659,195 | 1,523,973 | 5,590,602 | 42,872,166 | 19,508,622 | 24,633,367 |
| 2027 | 598,873 | 265,905 | 659,195 | 1,523,973 | 5,590,602 | 38,040,545 | 19,659,967 | 24,899,898 |
| 2028 | 598,873 | 265,905 | 659,195 | 1,523,973 | 5,590,602 | 40,478,806 | 19,525,747 | 24,665,664 |
| 2029 | 598,873 | 265,905 | 659,195 | 1,523,973 | 5,590,602 | 37,631,619 | 19,587,751 | 24,772,786 |
| 2030 | 598,873 | 265,905 | 659,195 | 1,523,973 | 5,590,602 | 38,714,397 | 19,449,440 | 24,531,618 |
| 2031 | 598,873 | 265,905 | 659,195 | 1,523,973 | 5,590,602 | 41,153,374 | 20,041,505 | 25,572,465 |
| 2032 | 598,873 | 265,905 | 659,195 | 1,523,973 | 5,590,602 | 37,960,008 | 19,183,036 | 24,070,925 |
| 2033 | 598,873 | 265,905 | 659,195 | 1,523,973 | 5,590,602 | 41,753,981 | 20,042,775 | 25,576,701 |
| 2034 | 598,873 | 265,905 | 659,195 | 1,523,973 | 5,590,602 | 38,705,651 | 19,253,482 | 24,192,644 |
| 2035 | 598,873 | 265,905 | 659,195 | 1,523,973 | 5,590,602 | 34,015,413 | 20,429,921 | 26,283,722 |
| TOTAL | 18,658,310 | 9,090,122 | 19,741,926 | 47,490,358 | 185,212,930 | 1,277,769,798 | 609,859,272 | 756,579,304 |

(a) Excludes extra peaking costs assigned directly to contractors. Refer to Appendix B text discussion of Table B-17 under "Project Water Charges."

(b) Costs for the period 1968 through 1987 are for an interim facility.

(c) The relatively minor costs of Del Valle Pumping Plant have been combined with those of South Bay Pumping Plant to simplify the allocation procedures.

**TABLE B-12. Variable OMP&R Costs to be Reimbursed through
Variable OMP&R Component of Transportation Charge**

(in dollars)

Sheet 2 of 4

| Calendar Year | CALIFORNIA AQUEDUCT (continued) | | | | | | |
|------------------|--|---|--|----------------------------------|--|--|---------------------------------------|
| | Reach 15A Wheeler Ridge Pumping Plant | Reach 16A Chrisman Pumping Plant | Reach 17E Edmonston Pumping Plant | Reach 18A Alamo Powerplant | Reach 22B Pearblossom Pumping Plant | Reach 23 Mojave Siphon Powerplant | Reach 24 Silverwood Lake (d) |
| | [9] | [10] | [11] | [12] | [13] | [14] | [15] |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1968 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1969 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1970 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1971 | 17,664 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1972 | 97,004 | 180,602 | 542,625 | 0 | 25,568 | 0 | 0 |
| 1973 | 278,923 | 441,598 | 1,548,428 | 0 | 231,389 | 0 | 0 |
| 1974 | 367,266 | 618,864 | 2,164,223 | 0 | 354,093 | 0 | 0 |
| 1975 | 595,252 | 1,149,731 | 4,010,395 | 0 | 604,161 | 0 | 0 |
| 1976 | 756,175 | 1,561,385 | 5,443,936 | 0 | 932,444 | 0 | 0 |
| 1977 | 337,889 | 703,802 | 2,360,624 | 0 | 358,028 | 0 | 0 |
| 1978 | 658,404 | 1,186,696 | 4,180,131 | 0 | 1,551,015 | 0 | 0 |
| 1979 | 791,488 | 1,581,250 | 5,475,688 | 0 | 1,881,587 | 0 | 0 |
| 1980 | 1,047,495 | 2,102,439 | 7,028,235 | 0 | 1,762,063 | 0 | 0 |
| 1981 | 1,319,739 | 2,838,773 | 9,351,931 | 0 | 2,296,771 | 0 | 0 |
| 1982 | 1,213,660 | 2,424,920 | 8,352,207 | 0 | 1,498,620 | 0 | 0 |
| 1983 | 304,715 | 540,330 | 1,582,582 | 0 | 341,957 | 0 | 384,275 |
| 1984 | 602,408 | 1,129,131 | 3,446,759 | 0 | 622,123 | 0 | 0 |
| 1985 | 1,397,098 | 2,781,953 | 9,261,674 | 0 | 1,195,768 | 0 | 0 |
| 1986 | 2,432,322 | 4,999,949 | 16,956,023 | (1,013,756) | 2,359,599 | 0 | 0 |
| 1987 | 2,223,371 | 4,456,059 | 14,684,476 | (1,026,193) | 1,831,238 | 0 | 131,606 |
| 1988 | 2,560,462 | 5,126,229 | 16,819,159 | (744,374) | 2,375,784 | 0 | 0 |
| 1989 | 3,974,290 | 8,369,623 | 28,090,313 | (766,443) | 4,102,557 | 0 | 686,468 |
| 1990 | 6,019,952 | 13,630,073 | 48,369,421 | (834,673) | 6,504,876 | 0 | 89,075 |
| 1991 | 1,031,345 | 2,426,220 | 8,641,086 | (269,625) | 996,352 | 0 | 0 |
| 1992 | 1,314,358 | 2,642,161 | 8,854,347 | (934,311) | 1,167,670 | 0 | 156,847 |
| 1993 | (102,311) | (582,580) | (2,649,876) | (56,908) | (253,503) | 0 | (34,870) |
| 1994 | 2,516,185 | 5,276,189 | 18,302,830 | (58,712) | 2,572,826 | 0 | 0 |
| 1995 | 841,178 | 1,677,210 | 5,571,517 | (1,242,189) | 1,025,717 | 0 | 467,095 |
| 1996 | 2,231,167 | 4,723,600 | 16,483,976 | (2,644,648) | 2,487,165 | (857,876) | 1,959,474 |
| 1997 | 2,417,154 | 5,424,334 | 19,413,834 | (2,488,338) | 3,037,087 | (1,680,469) | 0 |
| 1998 | (295,861) | (664,846) | (2,312,470) | (2,016,390) | (443,482) | (1,253,110) | (144,207) |
| 1999 | 1,298,081 | 3,342,538 | 12,958,478 | (2,889,226) | 1,889,956 | (2,572,618) | (4) |
| 2000 | 2,951,510 | 6,793,024 | 24,510,995 | (5,129,551) | 3,856,403 | (4,429,170) | (4) |
| 2001 | 15,241,135 | 34,335,979 | 126,871,576 | (3,298,154) | 19,028,938 | (3,649,141) | (3) |
| 2002 | 8,739,064 | 19,737,817 | 72,531,712 | (4,926,460) | 10,685,010 | (5,255,606) | (2) |
| 2003 | 11,106,205 | 25,313,673 | 93,170,014 | (3,431,336) | 14,842,643 | (6,759,223) | (1) |
| 2004 | 12,919,772 | 29,501,581 | 108,469,488 | (6,248,380) | 16,949,193 | (7,691,928) | 0 |
| 2005 | 13,013,205 | 29,569,323 | 105,364,252 | (6,140,775) | 18,660,122 | (6,779,365) | 0 |
| 2006 | 11,858,800 | 27,070,645 | 91,181,890 | (4,022,373) | 16,473,668 | (6,347,766) | 0 |
| 2007 | 16,460,225 | 37,219,330 | 127,533,425 | (2,992,981) | 19,810,564 | (5,908,398) | 0 |
| 2008 | 11,915,936 | 24,071,890 | 83,416,146 | (3,318,573) | 11,287,201 | (3,217,465) | 0 |
| 2009 | 8,071,881 | 17,512,972 | 62,124,002 | (3,132,264) | 8,000,198 | (2,255,901) | 0 |
| 2010 | 10,155,585 | 21,402,968 | 72,586,642 | (2,891,461) | 9,188,968 | (2,946,904) | 0 |
| 2011 | 25,713,031 | 54,541,854 | 188,020,656 | (7,383,348) | 33,909,057 | (11,450,443) | 0 |
| 2012 | 21,515,702 | 45,665,412 | 157,352,603 | (6,786,861) | 28,330,567 | (9,948,040) | 3,105,998 |
| 2013 | 18,879,147 | 44,071,101 | 164,619,590 | (6,856,357) | 28,545,284 | (8,526,079) | 2,188,242 |
| 2014 | 20,458,239 | 47,857,293 | 178,967,632 | (7,244,547) | 30,416,235 | (9,171,994) | 0 |
| 2015 | 23,559,150 | 55,295,933 | 207,144,614 | (7,657,341) | 32,413,446 | (10,048,805) | 0 |
| 2016 | 24,389,443 | 57,285,305 | 214,680,857 | (7,937,030) | 33,836,160 | (10,870,869) | 4,228,307 |
| 2017 | 22,681,986 | 53,673,871 | 201,000,614 | (7,692,208) | 32,472,910 | (10,574,097) | 0 |
| 2018 | 25,082,224 | 58,946,494 | 220,976,669 | (8,100,795) | 34,620,681 | (11,015,836) | 6,569,801 |
| 2019 | 23,919,363 | 56,160,063 | 210,419,946 | (7,664,030) | 32,548,858 | (10,312,859) | 0 |
| 2020 | 24,340,624 | 57,168,796 | 214,240,202 | (7,830,038) | 33,464,317 | (10,672,997) | 0 |
| 2021 | 24,297,743 | 57,066,220 | 213,851,812 | (7,880,914) | 33,430,747 | (10,815,943) | 151,523 |
| 2022 | 24,402,385 | 57,316,822 | 214,801,089 | (7,877,206) | 33,495,494 | (10,653,021) | 3,498,893 |
| 2023 | 24,615,551 | 57,827,762 | 216,736,985 | (7,994,730) | 33,899,000 | (11,017,140) | 2,121,563 |
| 2024 | 24,325,832 | 57,133,646 | 214,107,333 | (7,793,763) | 32,913,048 | (10,383,541) | 0 |
| 2025 | 24,512,603 | 57,580,988 | 215,801,942 | (7,975,827) | 33,665,207 | (10,548,861) | 3,438,553 |
| 2026 | 24,236,879 | 56,920,593 | 213,300,492 | (7,828,788) | 33,082,216 | (10,236,617) | 0 |
| 2027 | 24,511,402 | 57,578,032 | 215,790,555 | (7,931,175) | 33,571,770 | (10,698,165) | 1,472,019 |
| 2028 | 24,270,052 | 56,999,895 | 213,600,595 | (7,878,207) | 33,312,937 | (10,310,766) | 0 |
| 2029 | 24,380,385 | 57,263,963 | 214,600,505 | (7,900,131) | 33,474,843 | (10,608,631) | 804,642 |
| 2030 | 24,131,930 | 56,668,933 | 212,346,690 | (7,812,441) | 33,183,422 | (10,543,813) | 0 |
| 2031 | 25,205,761 | 59,242,700 | 222,099,243 | (8,045,478) | 34,193,502 | (10,610,201) | 6,088,435 |
| 2032 | 23,658,172 | 55,535,130 | 208,053,996 | (7,630,706) | 32,330,019 | (9,878,803) | 0 |
| 2033 | 25,210,118 | 59,253,214 | 222,139,224 | (8,108,530) | 34,447,758 | (10,672,084) | 3,331,764 |
| 2034 | 23,783,303 | 55,834,479 | 209,187,283 | (7,745,859) | 32,674,514 | (10,222,757) | 0 |
| 2035 | 25,943,657 | 61,014,484 | 228,820,490 | (8,165,347) | 34,716,411 | (10,577,502) | 4,153,037 |
| TOTAL | 758,904,873 | 1,746,520,418 | 6,435,356,311 | (256,239,751) | 1,015,040,740 | (321,974,804) | 44,848,526 |

(d) These values represent a proportionate allocation of the total variable OMP&R costs of pumping and recovery plants (Table B-3) associated with net annual withdrawal for Project Transportation Facilities. The allocation is determined annually by applying the following ratio, calculated from the data shown in Table B-6: "Reservoir Storage Changes" (withdrawals, as a positive value) conveyed through each plant, divided by "Total" annual quantity conveyed through each plant, in a The costs so determined are accumulated for all upstream plants for each year, for each respective reservoir.

**TABLE B-12. Variable OMP&R Costs to be Reimbursed through
Variable OMP&R Component of Transportation Charge**

(in dollars)

Sheet 3 of 4

| Calendar Year | CALIFORNIA AQUEDUCT (continued) | | | | | | |
|----------------------|---------------------------------|-------------------------------|-----------------------------------|-----------------------------------|-----------------------|-------------------------|---------------------|
| | Reach 26A | EBX Reach 2B | EBX Reach 3A | EBX Reach 4B | Reach 28J | Reach 29A | Reach 29G |
| | Devil Canyon Powerplant | Greenspot Pumping Plant | Crafton Hills Pumping Plant | Cherry Valley Pumping Plant | Lake Perris (d) | Oso Pumping Plant | Warne Powerplant |
| | [16] | [17] | [18] | [19] | [20] | [21] | [22] |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1968 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1969 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1970 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1972 | (3,024) | 0 | 0 | 0 | 0 | 102,315 | 0 |
| 1973 | (436,768) | 0 | 0 | 0 | 0 | 158,587 | 0 |
| 1974 | (521,656) | 0 | 0 | 0 | 0 | 193,311 | 0 |
| 1975 | (1,071,023) | 0 | 0 | 0 | 0 | 350,436 | 0 |
| 1976 | (1,519,156) | 0 | 0 | 0 | 0 | 362,767 | 0 |
| 1977 | (1,175,966) | 0 | 0 | 0 | 0 | 111,135 | 0 |
| 1978 | (3,038,194) | 0 | 0 | 0 | 0 | 125,183 | 0 |
| 1979 | (3,419,581) | 0 | 0 | 0 | 0 | 138,384 | 0 |
| 1980 | (3,318,152) | 0 | 0 | 0 | 0 | 236,768 | 0 |
| 1981 | (3,842,971) | 0 | 0 | 0 | 0 | 444,280 | 0 |
| 1982 | (2,736,072) | 0 | 0 | 0 | 0 | 539,245 | (783,626) |
| 1983 | (5,478,830) | 0 | 0 | 0 | 0 | 71,197 | (495,041) |
| 1984 | (7,326,285) | 0 | 0 | 0 | (10,080) | 240,134 | (2,027,345) |
| 1985 | (10,477,567) | 0 | 0 | 0 | (56,570) | 874,069 | (5,930,176) |
| 1986 | (11,484,996) | 0 | 0 | 0 | 0 | 1,269,590 | (5,579,301) |
| 1987 | (10,814,483) | 0 | 0 | 0 | 53,242 | 1,325,936 | (6,304,539) |
| 1988 | (14,495,967) | 0 | 0 | 0 | 0 | 1,421,097 | (6,993,235) |
| 1989 | (18,532,961) | 0 | 0 | 0 | 89,890 | 2,013,335 | (8,235,085) |
| 1990 | (20,911,839) | 0 | 0 | 0 | 147,163 | 2,857,409 | (11,011,065) |
| 1991 | (4,884,013) | 0 | 0 | 0 | 0 | 534,818 | (3,600,495) |
| 1992 | (9,513,281) | 0 | 0 | 0 | (61,233) | 717,740 | (5,508,780) |
| 1993 | (7,502,549) | 0 | 0 | 0 | 0 | 68,719 | (4,525,955) |
| 1994 | (11,662,318) | 0 | 0 | 0 | 147,989 | 1,203,006 | (5,813,538) |
| 1995 | (9,742,248) | 0 | 0 | 0 | 0 | 247,869 | (1,934,202) |
| 1996 | (12,358,465) | 0 | 0 | 0 | 0 | 895,929 | (4,248,531) |
| 1997 | (13,293,791) | 0 | 0 | 0 | 111,776 | 897,657 | (4,797,589) |
| 1998 | (10,108,555) | 0 | 0 | 0 | 0 | (67,399) | (1,811,154) |
| 1999 | (15,052,348) | 0 | 0 | 0 | (4) | 655,690 | (5,341,364) |
| 2000 | (25,857,106) | 0 | 0 | 0 | (4) | 1,181,473 | (9,464,490) |
| 2001 | (19,510,278) | 0 | 0 | 0 | (3) | 6,440,286 | (7,987,833) |
| 2002 | (24,676,763) | 0 | 0 | 0 | (2) | 3,806,290 | (10,286,903) |
| 2003 | (28,046,279) | 0 | 0 | 0 | (1) | 4,504,446 | (10,281,921) |
| 2004 | (31,246,167) | 78,351 | 68,735 | 7,271 | 0 | 5,484,542 | (12,033,954) |
| 2005 | (30,604,351) | 69,752 | 49,118 | 2,575 | 0 | 4,225,630 | (8,251,156) |
| 2006 | (34,389,659) | 140,127 | 153,528 | 18,855 | 0 | 3,332,972 | (8,684,978) |
| 2007 | (28,705,769) | 269,892 | 265,502 | 14,522 | 0 | 6,256,806 | (9,522,236) |
| 2008 | (16,403,544) | 274,587 | 351,042 | 10,978 | 0 | 4,798,779 | (7,382,331) |
| 2009 | (13,660,753) | 327,221 | 344,024 | 9,094 | 0 | 3,781,575 | (6,623,825) |
| 2010 | (9,209,260) | 519,051 | 647,771 | 0 | 0 | 4,567,034 | (5,434,798) |
| 2011 | (32,816,808) | 292,422 | 364,940 | 0 | 0 | 8,263,782 | (10,330,453) |
| 2012 | (28,562,504) | 295,427 | 368,690 | 0 | 3,146,088 | 6,875,902 | (9,085,903) |
| 2013 | (30,032,861) | 369,281 | 460,860 | 0 | 0 | 7,589,270 | (12,164,030) |
| 2014 | (32,572,222) | 478,814 | 597,555 | 0 | 780,212 | 8,534,732 | (13,657,608) |
| 2015 | (34,284,195) | 541,404 | 675,667 | 0 | 0 | 10,430,979 | (16,596,965) |
| 2016 | (34,694,657) | 541,404 | 675,667 | 0 | 235,610 | 10,779,869 | (17,098,386) |
| 2017 | (34,300,173) | 541,404 | 675,667 | 0 | 0 | 9,697,636 | (15,425,842) |
| 2018 | (35,291,433) | 541,404 | 675,667 | 0 | 3,731,220 | 11,220,952 | (17,756,043) |
| 2019 | (34,298,572) | 541,404 | 675,667 | 0 | 0 | 10,761,436 | (17,018,056) |
| 2020 | (35,191,643) | 541,404 | 675,667 | 0 | 3,156,924 | 10,864,667 | (17,172,491) |
| 2021 | (34,629,012) | 541,404 | 675,667 | 0 | 72,588 | 10,832,063 | (17,120,689) |
| 2022 | (34,328,708) | 541,404 | 675,667 | 0 | 0 | 10,918,115 | (17,260,770) |
| 2023 | (34,907,248) | 541,404 | 675,667 | 0 | 1,506,880 | 10,993,654 | (17,353,102) |
| 2024 | (34,741,482) | 541,404 | 675,667 | 0 | 0 | 11,058,152 | (17,483,127) |
| 2025 | (34,556,799) | 541,404 | 675,667 | 0 | 0 | 10,971,430 | (17,330,194) |
| 2026 | (34,867,703) | 541,404 | 675,667 | 0 | 714,376 | 10,896,981 | (17,211,395) |
| 2027 | (34,696,345) | 541,404 | 675,667 | 0 | 0 | 11,005,224 | (17,395,875) |
| 2028 | (34,945,673) | 541,404 | 675,667 | 0 | 984,722 | 10,846,347 | (17,152,286) |
| 2029 | (34,593,607) | 541,404 | 675,667 | 0 | 0 | 10,902,714 | (17,247,006) |
| 2030 | (34,677,769) | 541,404 | 675,667 | 0 | 0 | 10,749,021 | (16,986,805) |
| 2031 | (34,827,258) | 541,404 | 675,667 | 0 | 358,165 | 11,517,532 | (18,206,908) |
| 2032 | (34,202,736) | 541,404 | 675,667 | 0 | 0 | 10,567,826 | (16,684,685) |
| 2033 | (35,469,983) | 541,404 | 675,667 | 0 | 4,704,436 | 11,422,651 | (18,053,073) |
| 2034 | (34,086,438) | 541,404 | 675,667 | 0 | 0 | 10,571,690 | (16,687,916) |
| 2035 | (35,737,701) | 541,404 | 675,667 | 0 | 6,420,643 | 12,177,217 | (19,369,039) |
| TOTAL | (1,330,346,498) | 14,484,408 | 17,860,772 | 63,295 | 26,234,027 | 326,818,882 | (588,744,093) |

**TABLE B-12. Variable OMP&R Costs to be Reimbursed through
Variable OMP&R Component of Transportation Charge^a**

(in dollars)

Sheet 4 of 4

| Calendar Year | CALIFORNIA AQUEDUCT (continued) | | | | | | GRAND TOTAL |
|----------------------|---------------------------------|-----------------------|---------------------|--|--|---------------|--------------------|
| | Reach 29H | Reach 29J | Reach 30 | Reach 31A | Reach 33A | Total | |
| | Pyramid Lake (d) | Castaic Powerplant | Castaic Lake (d) | Las Perillas & Badger Hill Pumping Plants | Devil's Den, Bluestone & Polonio Pumping Plants | | |
| | [23] | [24] | [25] | [26] | [27] | [28] | [29] |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 36,970 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 57,711 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 74,134 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 142,609 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 192,605 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 13,881 | 236,998 |
| 1968 | 0 | 0 | 0 | 118,676 | 0 | 774,253 | 1,117,913 |
| 1969 | 0 | 0 | 0 | 78,350 | 0 | 507,516 | 773,646 |
| 1970 | 0 | 0 | 0 | 136,429 | 0 | 693,842 | 1,103,798 |
| 1971 | 0 | 0 | 0 | 166,296 | 0 | 1,121,164 | 1,513,435 |
| 1972 | 0 | (211,144) | 0 | 237,638 | 0 | 2,648,786 | 3,261,922 |
| 1973 | 0 | (1,057,564) | 0 | 120,913 | 0 | 2,661,036 | 3,168,975 |
| 1974 | 0 | (1,547,884) | 0 | 118,582 | 0 | 3,336,872 | 3,919,920 |
| 1975 | 0 | (2,455,461) | 0 | 94,848 | 0 | 5,689,034 | 6,053,571 |
| 1976 | 0 | (2,827,557) | 0 | 141,260 | 0 | 7,886,569 | 8,478,786 |
| 1977 | 0 | (3,734,462) | 0 | 71,311 | 0 | 628,796 | 1,164,427 |
| 1978 | 0 | (1,542,479) | 0 | 179,925 | 0 | 6,979,261 | 7,587,308 |
| 1979 | 0 | (2,773,323) | 0 | 192,126 | 0 | 9,249,255 | 9,870,628 |
| 1980 | 0 | (3,408,863) | 0 | 168,458 | 0 | 9,882,560 | 10,425,874 |
| 1981 | 0 | (2,834,322) | 0 | 169,177 | 0 | 16,972,365 | 17,563,899 |
| 1982 | 0 | (3,463,971) | 0 | 168,390 | 0 | 12,859,335 | 13,477,272 |
| 1983 | 65,741 | (3,260,764) | (3,176,515) | 17,920 | 0 | (7,537,336) | (7,452,772) |
| 1984 | 0 | (2,336,089) | (2,151,129) | 112,679 | 0 | (4,435,858) | (4,159,493) |
| 1985 | 0 | (15,698,638) | 0 | 146,843 | 0 | (10,322,391) | (9,861,183) |
| 1986 | 0 | (11,072,448) | 0 | 297,886 | 0 | 10,799,251 | 11,622,736 |
| 1987 | 68,410 | (11,562,269) | (41,897) | 245,082 | 0 | 5,787,267 | 6,701,446 |
| 1988 | 54,038 | (12,292,638) | (211,526) | 214,519 | 0 | 5,288,073 | 6,239,206 |
| 1989 | 14,390 | (14,514,469) | 126,791 | 282,180 | 0 | 23,323,739 | 24,585,083 |
| 1990 | 0 | (20,116,506) | 245,180 | 416,832 | 0 | 46,159,453 | 48,154,173 |
| 1991 | 439,068 | (6,579,194) | 0 | 3,610 | 0 | 2,057,456 | 2,462,221 |
| 1992 | 0 | (9,493,502) | (935,650) | 101,665 | 0 | (5,857,012) | (5,509,966) |
| 1993 | (13,291) | (9,266,007) | (446,527) | (111,306) | 0 | (24,723,671) | (24,907,971) |
| 1994 | 20,518 | (10,547,914) | (86,993) | 206,258 | 0 | 12,537,293 | 13,452,216 |
| 1995 | 0 | (4,049,615) | 0 | 243,434 | 0 | (443,026) | (142,956) |
| 1996 | 0 | (8,457,232) | 0 | 296,170 | 0 | 15,023,643 | 15,870,541 |
| 1997 | 0 | (8,727,328) | (897) | 298,483 | 208,816 | 13,156,006 | 14,336,880 |
| 1998 | (931,305) | (4,644,120) | (2,108,804) | (55,491) | (92,902) | (27,430,097) | (27,590,265) |
| 1999 | (4) | (9,672,802) | (4) | 160,203 | 228,670 | (4,321,902) | (3,852,979) |
| 2000 | (4) | (17,958,033) | (4) | 224,516 | 370,076 | (9,270,643) | (8,320,710) |
| 2001 | (3) | (13,981,232) | (3) | 1,082,131 | 2,162,821 | 205,588,501 | 210,480,714 |
| 2002 | (2) | (18,455,025) | (2) | 544,053 | 1,351,161 | 86,240,230 | 88,835,892 |
| 2003 | (1) | (17,309,610) | (1) | 636,846 | 1,524,988 | 126,430,259 | 129,386,720 |
| 2004 | 0 | (21,400,039) | 0 | 670,805 | 1,774,635 | 140,549,338 | 143,541,845 |
| 2005 | 0 | (14,285,372) | 0 | 843,113 | 1,708,384 | 162,800,640 | 166,177,751 |
| 2006 | 0 | (14,139,396) | 0 | 823,639 | 1,384,730 | 130,535,443 | 133,650,019 |
| 2007 | 0 | (19,017,327) | 0 | 1,285,163 | 2,279,286 | 196,734,028 | 201,844,888 |
| 2008 | 0 | (15,322,207) | 0 | 1,076,523 | 1,599,332 | 126,644,168 | 130,727,683 |
| 2009 | 0 | (16,146,570) | 0 | 766,985 | 1,285,469 | 82,011,808 | 85,266,077 |
| 2010 | 0 | (11,176,104) | 0 | 665,364 | 2,219,911 | 128,968,829 | 134,597,892 |
| 2011 | 0 | (18,890,984) | 0 | 1,535,228 | 5,173,312 | 308,482,687 | 317,157,407 |
| 2012 | 0 | (16,403,427) | 2,997,738 | 1,085,892 | 2,937,465 | 272,642,478 | 280,070,578 |
| 2013 | 0 | (19,017,919) | 0 | 1,534,810 | 3,883,230 | 262,627,395 | 267,117,904 |
| 2014 | 0 | (21,492,712) | 0 | 1,534,810 | 3,883,230 | 282,858,434 | 287,403,101 |
| 2015 | 0 | (26,199,602) | 0 | 1,764,719 | 5,433,577 | 323,947,860 | 331,062,292 |
| 2016 | 0 | (27,071,170) | 1,153,942 | 1,764,719 | 5,433,577 | 340,527,519 | 347,641,951 |
| 2017 | 0 | (24,332,743) | 0 | 1,764,719 | 5,433,577 | 314,357,823 | 321,472,255 |
| 2018 | 0 | (28,178,919) | 4,943,495 | 1,764,719 | 5,433,577 | 361,948,604 | 369,063,036 |
| 2019 | 0 | (27,008,953) | 0 | 1,764,719 | 5,433,577 | 328,322,887 | 335,437,319 |
| 2020 | 0 | (27,271,195) | 0 | 1,764,719 | 5,433,577 | 335,686,015 | 342,800,447 |
| 2021 | 0 | (27,186,689) | 0 | 1,764,719 | 5,433,577 | 333,862,351 | 340,976,926 |
| 2022 | 0 | (27,406,785) | 7,223 | 1,764,719 | 5,433,577 | 338,420,815 | 345,535,390 |
| 2023 | 0 | (27,592,372) | 50,219 | 1,764,719 | 5,433,577 | 341,805,635 | 348,920,210 |
| 2024 | 0 | (27,761,283) | 1,576,015 | 1,764,719 | 5,433,577 | 333,133,423 | 340,247,998 |
| 2025 | 0 | (27,538,709) | 138,589 | 1,764,719 | 5,433,577 | 340,598,995 | 347,713,570 |
| 2026 | 0 | (27,347,727) | 0 | 1,764,719 | 5,433,577 | 337,088,829 | 344,203,404 |
| 2027 | 0 | (27,628,901) | 1,810,105 | 1,764,719 | 5,433,577 | 338,404,423 | 345,518,998 |
| 2028 | 0 | (27,224,953) | 0 | 1,764,719 | 5,433,577 | 335,588,247 | 342,702,822 |
| 2029 | 0 | (27,373,038) | 1,247,154 | 1,764,719 | 5,433,577 | 335,359,316 | 342,473,891 |
| 2030 | 0 | (26,978,387) | 0 | 1,764,719 | 5,433,577 | 331,191,603 | 338,306,178 |
| 2031 | 0 | (28,934,179) | 10,153,135 | 1,764,719 | 5,433,577 | 363,417,160 | 370,531,735 |
| 2032 | 0 | (26,513,093) | 0 | 1,764,719 | 5,433,577 | 324,864,456 | 331,979,031 |
| 2033 | 0 | (28,691,484) | 9,693,603 | 1,764,719 | 5,433,577 | 364,996,438 | 372,111,013 |
| 2034 | 0 | (26,522,520) | 0 | 1,764,719 | 5,433,577 | 327,352,923 | 334,467,498 |
| 2035 | 0 | (30,667,557) | 31,997,480 | 1,764,719 | 5,433,577 | 389,870,696 | 396,985,271 |
| TOTAL | (282,445) | (1,018,574,781) | 56,980,717 | 56,408,323 | 147,987,731 | 9,775,555,025 | 10,008,258,314 |

TABLE B-13. Capital and Operating Costs of Project Conservation Facilities to be Reimbursed through Delta Water Charge

| Calendar Year | (in dollars) | | | | | Planning and Pre-operating Costs (a, f) | Total |
|----------------------|--|--------------------------------|------------------------|---|---------------|---|---------------|
| | Initial Project Conservation Facilities (Portions of Upper Feather Lakes, Oroville-Thermalito and California Aqueduct Facilities) | | | | | | |
| | Capital Costs (a) | Capital Cost Credits (b) | Operating Costs (c) | Application of Oroville Power Revenues to: | | | |
| Capital Costs (d) | | | | Operating Costs (e) | | | |
| | [1] | [2] | [3] | [4] | [5] | [6] | [7] |
| 1952 | 171,322 | 0 | 0 | 0 | 0 | 0 | 171,322 |
| 1953 | 312,190 | 0 | 0 | 0 | 0 | 0 | 312,190 |
| 1954 | 308,624 | 0 | 0 | 0 | 0 | 0 | 308,624 |
| 1955 | 194,645 | 0 | 0 | 0 | 0 | 0 | 194,645 |
| 1956 | 1,357,077 | 0 | 0 | 0 | 0 | 0 | 1,357,077 |
| 1957 | 6,210,709 | 0 | 0 | 0 | 0 | 0 | 6,210,709 |
| 1958 | 9,510,916 | 0 | 0 | 0 | 0 | 0 | 9,510,916 |
| 1959 | 11,390,586 | 0 | 0 | 0 | 0 | 0 | 11,390,586 |
| 1960 | 14,463,274 | (4,850,000) | 0 | 0 | 0 | 0 | 9,613,274 |
| 1961 | 18,729,965 | (431,527) | 0 | 0 | 0 | 0 | 18,298,438 |
| 1962 | 9,099,967 | (479,280) | 0 | 0 | 0 | 0 | 8,620,687 |
| 1963 | 73,098,107 | (478,743) | (14,000) | 0 | 0 | 0 | 72,605,364 |
| 1964 | 62,629,003 | (751,330) | (14,000) | 0 | 0 | 107,780 | 61,971,453 |
| 1965 | 71,048,877 | (763,541) | (14,000) | 0 | 0 | 551,850 | 70,823,186 |
| 1966 | 125,376,541 | (748,649) | (14,000) | 0 | 0 | 1,081,023 | 125,694,915 |
| 1967 | 94,481,603 | (812,145) | (13,446) | 0 | 0 | 1,189,212 | 94,845,224 |
| 1968 | 39,986,145 | (431,574) | 1,303,821 | (951,000) | 0 | 793,399 | 40,700,791 |
| 1969 | 5,367,865 | (259,015) | 2,890,772 | (11,007,000) | 0 | 601,867 | (2,405,511) |
| 1970 | 4,208,411 | (203,733) | 4,818,634 | (14,650,000) | (1,500,000) | 516,659 | (6,810,029) |
| 1971 | 3,956,703 | (193,631) | 6,026,480 | (14,650,000) | (1,500,000) | 408,754 | (5,951,694) |
| 1972 | 4,662,254 | (196,361) | 5,393,011 | (14,650,000) | (1,500,000) | 287,374 | (6,003,722) |
| 1973 | 4,090,078 | (136,997) | 6,135,774 | (14,650,000) | (1,500,000) | 203,384 | (5,857,761) |
| 1974 | 6,852,718 | (137,503) | 6,944,723 | (17,950,000) | (1,500,000) | 201,907 | (5,588,155) |
| 1975 | 8,343,833 | (234,567) | 7,697,390 | (14,650,000) | (1,500,000) | 146,188 | (197,156) |
| 1976 | 6,189,617 | (204,944) | 7,067,037 | (14,650,000) | (1,500,000) | 205,234 | (2,893,056) |
| 1977 | 21,554,452 | (150,214) | 10,547,977 | (14,650,000) | (1,500,000) | 857,419 | 16,659,634 |
| 1978 | 8,031,393 | (64,566) | 12,851,158 | (14,650,000) | (1,500,000) | 2,131,286 | 6,799,271 |
| 1979 | 9,751,861 | 0 | 9,547,014 | (14,650,000) | (1,500,000) | 2,131,884 | 5,280,759 |
| 1980 | 11,345,574 | 0 | 13,258,298 | (14,650,000) | (1,500,000) | 3,638,851 | 12,092,723 |
| 1981 | 11,921,267 | 0 | 10,326,538 | (14,650,000) | (1,500,000) | 4,597,474 | 10,695,279 |
| 1982 | 17,479,060 | 0 | 16,154,872 | (14,650,000) | (1,500,000) | 4,594,682 | 22,078,614 |
| 1983 | 12,763,378 | 0 | 22,251,331 | (34,705,000) | (8,735,000) | 3,751,993 | (4,673,298) |
| 1984 | 9,367,268 | 0 | 22,700,224 | (14,650,000) | (10,348,000) | 2,979,126 | 10,048,618 |
| 1985 | 12,538,173 | 0 | 23,462,283 | (14,650,000) | (8,198,000) | 2,069,024 | 15,221,480 |
| 1986 | 21,586,489 | 0 | 26,479,379 | (14,650,000) | (9,107,000) | 1,602,419 | 25,911,287 |
| 1987 | 32,734,633 | 0 | 23,479,839 | (14,650,000) | (9,451,000) | 1,762,179 | 33,875,651 |
| 1988 | 33,028,679 | 0 | 25,832,491 | (14,650,000) | (8,677,000) | 1,808,899 | 37,343,069 |
| 1989 | 11,075,132 | 0 | 28,442,946 | (14,650,000) | (8,102,000) | 2,678,007 | 19,444,085 |
| 1990 | 28,764,328 | 0 | 37,430,776 | (14,650,000) | (8,498,000) | 1,436,712 | 44,483,816 |
| 1991 | 37,462,303 | 0 | 76,586,450 | (14,650,000) | (9,487,000) | 1,727,664 | 91,639,417 |
| 1992 | 29,169,134 | 0 | 32,280,228 | (14,650,000) | (8,526,000) | 1,707,822 | 39,981,184 |
| 1993 | 22,366,872 | 0 | 36,884,103 | (14,650,000) | (8,768,000) | 1,708,490 | 37,541,465 |
| 1994 | 14,709,626 | 0 | 41,193,693 | (14,650,000) | (7,484,000) | 2,134,392 | 35,903,711 |
| 1995 | 15,120,857 | 0 | 46,162,374 | (14,650,000) | (4,976,939) | 2,042,481 | 43,698,773 |
| 1996 | 10,991,547 | 0 | 50,885,567 | (14,650,000) | (5,503,289) | 2,448,692 | 44,172,517 |
| 1997 | 15,266,344 | 0 | 51,788,497 | (14,650,000) | (5,740,515) | 1,699,730 | 48,364,056 |
| 1998 | 3,852,558 | 0 | 54,726,293 | (14,650,000) | (8,155,000) | 1,193,198 | 36,967,049 |
| 1999 | 7,471,450 | 0 | 55,260,745 | (14,650,000) | (9,198,000) | 9,686 | 38,893,881 |
| 2000 | 9,916,831 | 0 | 56,523,907 | (14,688,338) | (10,297,482) | 13,491 | 41,468,409 |
| 2001 | 9,870,123 | 0 | 76,258,134 | (16,223,803) | (14,328,482) | 23,866 | 55,599,838 |
| 2002 | 19,295,930 | 0 | 68,574,018 | (19,498,891) | (20,826,560) | 24,426 | 47,568,923 |
| 2003 | 22,390,613 | 0 | 78,568,966 | (20,605,664) | (29,982,088) | 9,833 | 50,381,660 |
| 2004 | 17,413,478 | 0 | 92,043,438 | (17,530,688) | (35,845,422) | 7,548 | 56,088,354 |
| 2005 | (5,143,563) | 0 | 104,090,690 | (15,354,462) | (22,004,805) | 0 | 61,587,860 |
| 2006 | 7,928,636 | 0 | 101,862,894 | (15,210,585) | (21,005,765) | 0 | 73,575,180 |
| 2007 | 7,624,330 | 0 | 85,225,798 | (14,734,855) | (16,759,447) | 0 | 61,355,826 |
| 2008 | 5,829,498 | 0 | 100,771,525 | (14,665,045) | (19,295,181) | 0 | 72,640,797 |
| 2009 | 5,450,795 | 0 | 117,405,441 | (15,421,881) | (18,015,971) | 0 | 89,418,384 |
| 2010 | 17,089,496 | 0 | 112,959,048 | (15,953,842) | (20,547,575) | 0 | 93,547,128 |
| 2011 | 29,267,742 | 0 | 118,928,534 | (15,953,762) | (21,061,264) | 0 | 111,181,250 |
| 2012 | 34,416,170 | 0 | 126,758,403 | (15,954,379) | (21,587,796) | 0 | 123,632,399 |
| 2013 | 44,254,886 | 0 | 112,635,873 | (15,954,212) | (21,276,200) | 0 | 119,660,347 |
| 2014 | 21,640,508 | 0 | 116,442,363 | (15,953,988) | (21,488,962) | 0 | 100,639,921 |
| 2015 | 18,508,288 | 0 | 109,006,577 | (15,954,546) | (21,703,852) | 0 | 89,856,467 |
| 2016 | 1,269,795 | 0 | 110,399,913 | (15,953,901) | (21,920,890) | 0 | 73,794,917 |
| 2017 | 1,269,795 | 0 | 111,384,422 | (15,954,231) | (22,140,099) | 0 | 74,559,887 |
| 2018 | 398,680 | 0 | 113,836,104 | (15,953,993) | (22,361,500) | 0 | 75,919,291 |
| 2019 | 398,680 | 0 | 113,112,095 | (15,954,110) | (22,585,115) | 0 | 74,971,550 |
| 2020 | 398,680 | 0 | 113,513,392 | (15,954,212) | (22,810,967) | 0 | 75,146,893 |
| 2021 | 398,680 | 0 | 116,039,653 | (15,954,382) | (23,039,076) | 0 | 77,444,875 |
| 2022 | 398,680 | 0 | 116,521,015 | (15,954,073) | (23,269,467) | 0 | 77,696,155 |
| 2023 | 398,680 | 0 | 118,396,557 | (15,954,027) | (23,502,162) | 0 | 79,339,048 |
| 2024 | 398,680 | 0 | 118,625,680 | (15,954,042) | (23,737,183) | 0 | 79,333,135 |
| 2025 | 398,680 | 0 | 121,672,051 | (15,953,664) | (23,974,555) | 0 | 82,142,512 |
| 2026 | 398,680 | 0 | 124,098,669 | (15,954,123) | (24,214,301) | 0 | 84,328,925 |
| 2027 | 398,680 | 0 | 120,687,952 | (15,953,987) | (24,456,444) | 0 | 80,676,201 |
| 2028 | 398,680 | 0 | 123,007,108 | (15,953,791) | (24,701,008) | 0 | 82,750,989 |
| 2029 | 398,680 | 0 | 122,646,440 | (15,954,040) | (24,948,018) | 0 | 82,143,062 |
| 2030 | 398,680 | 0 | 125,331,587 | (14,650,000) | (25,197,498) | 0 | 85,882,769 |
| 2031 | 398,680 | 0 | 127,634,267 | (14,650,000) | (25,449,473) | 0 | 87,933,474 |
| 2032 | 398,680 | 0 | 127,193,768 | (14,650,000) | (25,703,968) | 0 | 87,238,460 |
| 2033 | 398,680 | 0 | 129,072,722 | (14,650,000) | (25,961,008) | 0 | 88,860,394 |
| 2034 | 398,680 | 0 | 129,975,323 | (14,650,000) | (26,220,618) | 0 | 89,503,385 |
| 2035 | 398,680 | 0 | 126,282,103 | (14,650,000) | (26,482,824) | 0 | 85,547,959 |
| TOTAL | 1,255,862,999 | (11,528,320) | 4,764,227,703 | (1,045,728,517) | (977,157,769) | 57,085,905 | 4,042,762,001 |

- (a) Reimbursed through the capital cost component of the Delta Water Charge.
 (b) Negotiated settlements as to the magnitude of SWP planning costs from 1952 through 1978.
 (c) Reimbursed through the minimum OMP&R component of the Delta Water Charge. Credits for Gianelli power generation are reflected in these net costs.
 (d) Revenues credited through the capital cost component of the Delta Water Charge.
 (e) Revenues credited through the minimum OMP&R component of the Delta Water Charge.
 (f) Under amendments of Articles 22(e) and 22(g), planning and pre-operating costs of additional Project Conservation Facilities incurred through 2009 reflected in the Delta Water Charge.

Tables B-14 through B-31

Note: Where applicable, the projected data values shown in this appendix are shaded and the bill year data are in **bold** type.

TABLE B-14. Capital Costs of Transportation Facilities Allocated to Each Contractor

(in dollars)

Sheet 1 of 4

| Calendar Year | NORTH BAY AREA | | | SOUTH BAY AREA | | | | CENTRAL COASTAL AREA | | |
|------------------|--------------------------|----------------------------|-------------|--|--|--|-------------|--|--------------------------------------|-------------|
| | Napa County FC&WCD | Solano County WA (a) | Total | Alameda County FC&WCD, Zone 7 | Alameda County Water District | Santa Clara Valley Water District | Total | San Luis Obispo County FC&WCD | Santa Barbara County FC&WCD | Total |
| | [1] | [2] | [3] | [4] | [5] | [6] | [7] | [8] | [9] | [10] |
| 1952 | 0 | 0 | 0 | 83 | 114 | 410 | 607 | 122 | 224 | 346 |
| 1953 | 0 | 0 | 0 | 323 | 479 | 1,808 | 2,610 | 336 | 620 | 956 |
| 1954 | 0 | 0 | 0 | 819 | 1,306 | 5,150 | 7,275 | 421 | 777 | 1,198 |
| 1955 | 0 | 0 | 0 | 977 | 1,570 | 6,297 | 8,844 | 211 | 390 | 601 |
| 1956 | 0 | 0 | 0 | 8,844 | 14,459 | 63,816 | 87,119 | 227 | 418 | 645 |
| 1957 | 15,199 | 11,436 | 26,635 | 21,564 | 35,240 | 649,596 | 706,400 | 291 | 536 | 827 |
| 1958 | 33,420 | 16,591 | 50,011 | 67,764 | 71,717 | 733,414 | 872,895 | 720 | 1,328 | 2,048 |
| 1959 | 20,697 | 6,591 | 27,288 | 154,255 | 143,730 | 493,050 | 791,035 | 10,636 | 69,139 | 79,775 |
| 1960 | 9,097 | 8,830 | 17,927 | 296,492 | 275,610 | 1,018,661 | 1,590,763 | 15,255 | 99,794 | 115,049 |
| 1961 | 6,950 | 7,445 | 14,395 | 853,506 | 802,675 | 1,914,709 | 3,570,890 | 10,163 | 36,681 | 46,844 |
| 1962 | (194) | (926) | (1,120) | 545,123 | 615,141 | 1,686,041 | 2,846,305 | 17,281 | 39,570 | 56,851 |
| 1963 | 1,319 | 1,111 | 2,430 | 657,426 | 1,281,271 | 3,243,838 | 5,182,535 | 68,821 | 140,841 | 209,662 |
| 1964 | 38,393 | 35,466 | 73,859 | 712,650 | 1,747,783 | 7,251,800 | 9,712,233 | 138,614 | 282,003 | 420,617 |
| 1965 | 198,833 | 62,221 | 261,054 | 360,779 | 606,025 | 3,414,457 | 4,381,261 | 250,706 | 497,152 | 747,858 |
| 1966 | 461,619 | 49,917 | 511,536 | 592,714 | 592,598 | 2,245,215 | 3,430,527 | 587,951 | 1,117,486 | 1,705,437 |
| 1967 | 1,569,498 | 40,379 | 1,609,877 | 796,995 | 803,951 | 2,401,862 | 4,002,808 | 936,412 | 1,762,694 | 2,699,106 |
| 1968 | 859,613 | 61,691 | 921,304 | 736,470 | 696,075 | 1,997,924 | 3,430,469 | 351,131 | 675,220 | 1,026,351 |
| 1969 | 74,388 | 59,318 | 133,706 | 269,698 | 293,275 | 764,950 | 1,327,923 | 76,966 | 164,583 | 241,549 |
| 1970 | 43,361 | 67,877 | 111,238 | 58,676 | 61,200 | 135,569 | 255,445 | 47,891 | 109,224 | 157,115 |
| 1971 | 26,763 | 34,052 | 60,815 | 12,086 | 18,227 | 84,089 | 114,402 | 28,638 | 80,715 | 109,353 |
| 1972 | 19,643 | 18,905 | 38,548 | 12,293 | 12,763 | 63,610 | 88,666 | 19,289 | 50,230 | 69,519 |
| 1973 | 56,510 | 30,874 | 87,384 | 10,494 | 12,136 | 39,380 | 62,010 | 23,010 | 56,178 | 79,188 |
| 1974 | 165,830 | 65,832 | 231,662 | 15,722 | 24,402 | 73,119 | 113,243 | 25,037 | 61,383 | 86,420 |
| 1975 | 91,824 | 89,234 | 181,058 | 16,730 | 15,806 | 41,394 | 73,930 | 14,740 | 61,416 | 76,156 |
| 1976 | 57,765 | 83,651 | 141,416 | 34,004 | 34,663 | 109,610 | 178,277 | 33,638 | 130,440 | 164,078 |
| 1977 | 64,167 | 80,147 | 144,314 | 46,229 | 45,115 | 133,375 | 224,719 | 108,324 | 264,720 | 373,044 |
| 1978 | 69,319 | 81,717 | 151,036 | 71,234 | 66,008 | 174,898 | 312,140 | 21,415 | 103,822 | 125,237 |
| 1979 | 191,273 | 282,907 | 474,180 | 45,468 | 42,943 | 110,665 | 199,076 | 22,941 | 125,669 | 148,610 |
| 1980 | 264,433 | 386,006 | 650,439 | 134,522 | 124,352 | 304,614 | 563,488 | 103,258 | 462,895 | 566,153 |
| 1981 | 227,606 | 383,086 | 610,692 | (33,738) | (29,856) | (65,637) | (129,231) | (15,416) | (135,240) | (150,656) |
| 1982 | 549,164 | 870,611 | 1,419,775 | 7,876 | 8,321 | 27,065 | 43,262 | 4,102 | (58,882) | (54,780) |
| 1983 | 1,254,900 | 1,433,061 | 2,687,961 | 138,413 | 131,515 | 339,246 | 609,174 | 32,196 | 110,287 | 142,483 |
| 1984 | 2,547,878 | 2,750,040 | 5,297,918 | 152,992 | 140,971 | 351,921 | 645,884 | 35,448 | 107,723 | 143,171 |
| 1985 | 7,143,123 | 6,443,613 | 13,586,736 | 19,776 | 19,245 | 53,491 | 92,512 | 17,424 | 78,896 | 96,320 |
| 1986 | 10,565,937 | 16,926,630 | 27,492,567 | 32,034 | 31,581 | 88,070 | 151,685 | 44,135 | 306,452 | 350,587 |
| 1987 | 7,979,832 | 12,599,507 | 20,579,339 | 50,153 | 48,675 | 138,959 | 237,787 | 126,995 | 1,342,116 | 1,469,111 |
| 1988 | 2,312,909 | 4,343,513 | 6,656,422 | 116,181 | 112,294 | 302,461 | 530,936 | 156,473 | 1,479,545 | 1,636,018 |
| 1989 | 1,224,538 | 1,553,352 | 2,777,890 | 108,320 | 102,804 | 260,092 | 471,216 | 152,173 | 1,210,940 | 1,363,113 |
| 1990 | 443,002 | 824,055 | 1,267,057 | 224,283 | 224,188 | 625,213 | 1,073,684 | 222,208 | 1,559,457 | 1,781,665 |
| 1991 | 99,848 | 89,269 | 189,117 | 413,426 | 383,368 | 946,246 | 1,743,040 | 298,398 | 2,184,088 | 2,482,486 |
| 1992 | 57,045 | 62,083 | 119,128 | 182,231 | 169,968 | 442,055 | 794,254 | 361,210 | 3,504,755 | 3,865,965 |
| 1993 | 122,423 | 128,634 | 251,057 | 129,344 | 125,312 | 342,416 | 597,072 | 1,170,649 | 11,997,954 | 13,168,603 |
| 1994 | 71,274 | 83,270 | 154,544 | 46,042 | 58,050 | 229,649 | 333,741 | 4,260,734 | 46,401,596 | 50,662,330 |
| 1995 | 30,605 | 29,271 | 59,876 | 97,808 | 97,063 | 257,484 | 452,355 | 12,268,787 | 155,255,849 | 167,524,636 |
| 1996 | 20,275 | 19,069 | 39,344 | 49,854 | 48,056 | 127,493 | 225,403 | 11,284,548 | 145,409,409 | 156,693,957 |
| 1997 | 20,039 | 107,784 | 127,823 | 82,598 | 78,996 | 209,517 | 371,111 | 3,184,506 | 38,158,718 | 41,343,224 |
| 1998 | 17,423 | 21,572 | 38,995 | 27,302 | 24,121 | 63,057 | 114,480 | 883,110 | 10,563,359 | 11,446,469 |
| 1999 | 67,602 | 106,355 | 173,957 | 74,165 | 73,552 | 208,296 | 356,013 | 928,738 | 9,596,058 | 10,524,796 |
| 2000 | 16,252 | 37,932 | 54,184 | 27,445 | 28,844 | 80,346 | 136,635 | 488,160 | 5,529,102 | 6,017,262 |
| 2001 | 6,598 | 13,750 | 20,348 | 140,394 | 270,055 | 1,856,845 | 2,267,294 | 72,358 | 539,206 | 611,564 |
| 2002 | 19,917 | 45,940 | 65,857 | 805,478 | 1,189,615 | 5,876,842 | 7,871,935 | 63,183 | 376,338 | 439,521 |
| 2003 | 54,235 | 20,712 | 74,947 | 1,156,874 | 1,331,274 | 4,619,175 | 7,107,323 | (2,583) | 77,174 | 74,591 |
| 2004 | 153,240 | 20,534 | 173,774 | 360,395 | 346,064 | 4,106,508 | 4,812,967 | 8,906 | 46,169 | 55,075 |
| 2005 | 60,512 | 62,965 | 123,477 | 358,147 | 339,988 | 1,541,938 | 2,240,073 | (10,430) | (175,947) | (186,377) |
| 2006 | 887,967 | 20,265 | 908,232 | 711,378 | 660,632 | 1,589,738 | 2,961,748 | 5,956 | 60,241 | 66,197 |
| 2007 | 3,237,280 | 43,244 | 3,280,524 | 715,234 | 661,058 | 1,586,475 | 2,962,767 | 15,046 | 81,927 | 96,973 |
| 2008 | 7,903,072 | 61,968 | 7,965,040 | 1,314,460 | 1,213,310 | 2,904,291 | 5,432,061 | 20,769 | 85,241 | 106,010 |
| 2009 | 1,197,373 | 20,419 | 1,217,792 | 2,754,599 | 2,576,522 | 6,144,919 | 11,476,040 | 9,253 | 75,381 | 84,634 |
| 2010 | 67,968 | 50,758 | 118,726 | 4,351,920 | 4,079,572 | 10,041,276 | 18,472,768 | 34,322 | 1,111,771 | 1,146,093 |
| 2011 | 291,559 | 265,800 | 557,359 | 888,026 | 911,043 | 2,262,449 | 4,061,518 | 98,397 | 1,385,587 | 1,483,984 |
| 2012 | 291,861 | 266,070 | 557,931 | 160,349 | 189,638 | 542,611 | 892,598 | 82,785 | 1,354,933 | 1,437,718 |
| 2013 | 307,069 | 279,755 | 586,824 | 142,944 | 176,487 | 516,784 | 836,215 | 72,244 | 1,347,204 | 1,419,448 |
| 2014 | 229,334 | 209,811 | 439,145 | 105,082 | 130,268 | 383,502 | 618,852 | 53,295 | 1,263,592 | 1,316,887 |
| 2015 | 25,100 | 26,045 | 51,145 | 9,433 | 12,127 | 40,759 | 62,319 | 4,595 | 1,044,872 | 1,049,467 |
| 2016 | 16,678 | 18,467 | 35,145 | 5,601 | 7,357 | 26,868 | 39,826 | 2,711 | 1,036,082 | 1,038,793 |
| 2017 | 16,678 | 18,467 | 35,145 | 5,601 | 7,357 | 26,868 | 39,826 | 2,711 | 1,036,082 | 1,038,793 |
| 2018 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2019 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2020 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2021 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2022 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2023 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2024 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2025 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2026 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2027 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2028 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2029 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2030 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2031 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2032 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2033 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2034 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2035 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 53,877,836 | 51,838,949 | 105,716,785 | 22,466,360 | 24,420,069 | 78,258,609 | 125,145,038 | 39,352,541 | 451,744,184 | 491,096,725 |

Note: Allocated capital costs as a result of permanent water transfers under Monterey are not reflected on this Table

(a) Costs from Table B-10 allocated to Solano County Water Agency are reduced herein by \$2,102,700 in 1986 and \$1,823,500 in 1987 under provisions of Amendment No. 10 to its water supply contract.

TABLE B-14. Capital Costs of Transportation Facilities Allocated to Each Contractor

(in dollars)

Sheet 2 of 4

| Calendar Year | SAN JOAQUIN VALLEY AREA | | | | | | | | | |
|------------------|--------------------------------------|---|---|--------------------------------|------------------------------------|-------------------|-----------------------|-------------------------------|---|-------------|
| | Dudley Ridge Water District | Empire West Side Irrigation District (b) | Future Contractor San Joaquin Valley | Kern County Water Agency | | | County of Kings | Oak Flat Water District | Tulare Lake Basin Water Storage District | Total |
| | | | | Municipal and Industrial | Municipal and (c) Industrial | Agri- cultural | | | | |
| | [11] | [12] | [13] | [14] | [15] | [16] | [17] | [18] | [19] | [20] |
| 1952 | 389 | 20 | 58 | 938 | 119 | 9,129 | 20 | 12 | 785 | 11,470 |
| 1953 | 1,076 | 53 | 161 | 2,887 | 345 | 27,383 | 55 | 33 | 2,157 | 34,150 |
| 1954 | 1,350 | 68 | 201 | 3,373 | 417 | 32,369 | 69 | 43 | 2,718 | 40,608 |
| 1955 | 677 | 34 | 101 | 1,497 | 197 | 14,721 | 35 | 23 | 1,371 | 18,656 |
| 1956 | 726 | 34 | 108 | 2,702 | 273 | 24,255 | 35 | 25 | 1,416 | 29,574 |
| 1957 | 932 | 38 | 139 | 6,048 | 494 | 49,932 | 39 | 29 | 1,707 | 59,358 |
| 1958 | 2,308 | 102 | 344 | 14,374 | 1,153 | 119,049 | 104 | 61 | 4,368 | 141,863 |
| 1959 | 7,384 | 364 | 2,517 | 26,218 | 2,597 | 253,891 | 372 | 381 | 14,757 | 308,481 |
| 1960 | 12,940 | 630 | 3,666 | 34,054 | 4,155 | 352,166 | 644 | 498 | 25,696 | 434,449 |
| 1961 | 21,848 | 1,063 | 3,954 | 51,407 | 6,500 | 538,707 | 1,087 | 598 | 43,377 | 668,541 |
| 1962 | 49,320 | 2,410 | 7,867 | 94,933 | 13,834 | 1,017,146 | 2,465 | 1,879 | 98,141 | 1,287,995 |
| 1963 | 208,757 | 10,687 | 32,172 | 364,014 | 55,715 | 3,934,636 | 10,932 | 5,990 | 425,330 | 5,048,233 |
| 1964 | 328,286 | 16,961 | 64,890 | 600,152 | 88,904 | 6,636,279 | 17,350 | 11,942 | 672,013 | 8,436,777 |
| 1965 | 538,215 | 27,481 | 117,996 | 1,098,999 | 152,930 | 11,999,892 | 28,116 | 21,802 | 1,095,126 | 15,080,557 |
| 1966 | 1,107,757 | 52,586 | 279,172 | 2,218,832 | 339,222 | 24,857,487 | 53,789 | 38,891 | 2,173,090 | 31,120,826 |
| 1967 | 852,537 | 39,537 | 445,562 | 2,012,744 | 286,990 | 23,629,026 | 40,444 | 34,775 | 1,653,424 | 28,995,044 |
| 1968 | 198,739 | 9,739 | 166,267 | 1,104,132 | 70,086 | 11,544,942 | 9,962 | 12,238 | 396,075 | 13,512,180 |
| 1969 | 94,436 | 4,793 | 35,473 | 616,516 | 27,216 | 6,416,147 | 4,903 | 7,302 | 191,574 | 7,398,360 |
| 1970 | 54,344 | 2,720 | 21,686 | 414,659 | 15,520 | 4,145,046 | 2,782 | 3,999 | 109,470 | 4,770,226 |
| 1971 | 25,462 | 1,291 | 12,094 | 190,552 | 7,114 | 1,622,274 | 1,320 | 540 | 51,618 | 1,912,265 |
| 1972 | 11,589 | 589 | 8,354 | 82,886 | 3,409 | 723,623 | 602 | 343 | 23,526 | 854,921 |
| 1973 | 6,657 | 335 | 10,201 | 39,973 | 1,980 | 458,527 | 343 | 221 | 13,448 | 531,685 |
| 1974 | 9,478 | 469 | 11,044 | 45,420 | 2,766 | 483,866 | 479 | 326 | 18,979 | 572,827 |
| 1975 | 13,329 | 677 | 5,246 | 36,467 | 3,710 | 382,743 | 692 | 425 | 27,048 | 470,337 |
| 1976 | 17,506 | 837 | 12,615 | 53,085 | 5,621 | 654,026 | 856 | 1,152 | 34,455 | 780,153 |
| 1977 | 9,672 | 436 | 47,790 | 36,478 | 3,753 | 886,672 | 446 | 494 | 18,497 | 1,004,238 |
| 1978 | 23,499 | (30,406) | 6,178 | 54,219 | 6,579 | 575,169 | 1,209 | 1,402 | 47,446 | 685,295 |
| 1979 | 25,051 | 1,295 | 5,664 | 53,866 | 6,610 | 559,746 | 1,325 | 1,862 | 51,293 | 706,712 |
| 1980 | 144,980 | (4,617) | 31,160 | 321,890 | 38,126 | 3,211,810 | 7,682 | 7,144 | 297,215 | 4,055,390 |
| 1981 | (5,427) | (15,464) | 200 | (44,773) | (1,223) | (385,275) | (296) | 1,752 | (11,324) | (461,830) |
| 1982 | 49,916 | 2,584 | 6,600 | 83,283 | 13,142 | 654,692 | 2,638 | 1,252 | 102,287 | 916,394 |
| 1983 | 52,429 | (35,295) | 12,125 | 110,465 | 13,872 | 1,073,500 | 2,769 | 1,327 | 107,337 | 1,338,529 |
| 1984 | 86,345 | 4,474 | 14,303 | 154,799 | 22,764 | 1,617,225 | 4,572 | 2,678 | 177,020 | 2,084,180 |
| 1985 | 25,435 | 1,311 | 5,649 | 47,055 | 6,766 | 484,485 | 1,341 | 1,176 | 52,013 | 625,231 |
| 1986 | 38,309 | (41,067) | 9,862 | 71,661 | 10,320 | 796,097 | 2,009 | 778 | 78,142 | 966,111 |
| 1987 | 28,769 | 1,476 | 7,004 | 55,537 | 7,969 | 616,845 | 1,509 | 1,491 | 58,679 | 779,279 |
| 1988 | 52,329 | 2,831 | 17,078 | 70,572 | 12,049 | 909,046 | 2,894 | 4,620 | 109,713 | 1,181,132 |
| 1989 | 156,099 | 8,019 | 27,551 | 352,103 | 42,943 | 3,834,481 | 8,201 | 12,134 | 318,604 | 4,760,135 |
| 1990 | 292,361 | 15,142 | 50,360 | 553,394 | 87,199 | 6,094,021 | 15,487 | 22,729 | 599,233 | 7,729,926 |
| 1991 | 349,413 | 18,103 | 60,419 | 580,572 | 91,765 | 6,447,565 | 18,515 | 23,486 | 716,292 | 8,306,130 |
| 1992 | 125,891 | 6,439 | 28,019 | 241,559 | 34,559 | 2,711,639 | 6,585 | 10,883 | 256,370 | 3,421,944 |
| 1993 | 86,113 | 4,375 | 30,245 | 174,630 | 23,840 | 2,059,168 | 4,474 | 4,698 | 174,772 | 2,562,315 |
| 1994 | 64,762 | 3,323 | 23,894 | 124,518 | 17,633 | 1,488,418 | 3,398 | 2,173 | 132,095 | 1,860,214 |
| 1995 | 82,969 | (1,000) | 72,734 | 167,698 | 24,390 | 2,472,332 | 4,355 | 2,824 | 169,318 | 2,995,620 |
| 1996 | 27,611 | (61,913) | 51,990 | 68,870 | 8,812 | 1,233,548 | 1,437 | 1,590 | 56,092 | 1,388,037 |
| 1997 | 136,503 | 7,041 | 48,721 | 241,400 | 36,417 | 2,951,687 | 7,195 | 3,706 | 279,205 | 3,711,875 |
| 1998 | 70,737 | (121,004) | 23,083 | 122,934 | 18,622 | 1,474,568 | 3,742 | 1,278 | 144,963 | 1,738,923 |
| 1999 | 81,197 | 4,192 | 26,645 | 142,983 | 21,661 | 1,715,933 | 4,285 | 3,846 | 166,160 | 2,166,902 |
| 2000 | 21,089 | 1,073 | 9,822 | 45,704 | 6,013 | 547,927 | 1,096 | (1,081) | 42,826 | 674,469 |
| 2001 | 17,776 | 907 | 7,862 | 36,078 | 5,062 | 432,671 | 927 | 781 | 36,153 | 538,217 |
| 2002 | 74,205 | 3,811 | 16,014 | 132,974 | 20,050 | 1,498,693 | 3,898 | 727 | 151,445 | 1,901,817 |
| 2003 | (51,255) | (2,679) | (5,522) | (76,239) | (13,107) | (824,213) | (2,740) | 337 | (105,557) | (1,080,975) |
| 2004 | 7,704 | 394 | 2,497 | 17,036 | 2,079 | 183,122 | 404 | 1,518 | 15,697 | 230,451 |
| 2005 | 28,566 | 1,472 | 5,735 | 52,684 | 7,562 | 539,367 | 1,504 | 561 | 58,404 | 695,855 |
| 2006 | 2,789 | 142 | 774 | 17,471 | 756 | 57,964 | 146 | 553 | 5,666 | 86,261 |
| 2007 | 11,364 | 569 | 3,585 | 30,253 | 3,171 | 255,577 | 582 | 601 | 22,899 | 328,601 |
| 2008 | 37,853 | 1,953 | 7,720 | 64,676 | 10,003 | 715,907 | 1,996 | 1,353 | 77,438 | 918,899 |
| 2009 | 16,673 | 850 | 3,468 | 50,997 | 4,505 | 332,137 | 870 | 785 | 33,906 | 444,191 |
| 2010 | 88,292 | 4,566 | 14,657 | 165,709 | 23,257 | 1,615,785 | 4,670 | 1,359 | 180,835 | 2,099,130 |
| 2011 | 138,242 | 7,083 | 34,735 | 263,733 | 37,056 | 2,859,586 | 7,245 | 5,146 | 281,778 | 3,634,604 |
| 2012 | 90,104 | 4,578 | 27,401 | 174,771 | 24,544 | 2,014,611 | 4,683 | 6,887 | 182,885 | 2,530,464 |
| 2013 | 44,636 | 2,217 | 21,570 | 100,724 | 12,684 | 1,222,177 | 2,268 | 2,434 | 89,564 | 1,498,274 |
| 2014 | 32,483 | 1,610 | 15,811 | 76,733 | 9,276 | 924,269 | 1,647 | 1,608 | 65,108 | 1,128,545 |
| 2015 | 5,066 | 249 | 1,269 | 19,453 | 1,497 | 199,984 | 255 | 210 | 10,119 | 238,102 |
| 2016 | 4,333 | 214 | 729 | 11,082 | 1,281 | 109,412 | 219 | 172 | 8,668 | 136,110 |
| 2017 | 4,333 | 214 | 729 | 10,211 | 1,281 | 104,321 | 219 | 172 | 8,668 | 130,148 |
| 2018 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2019 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2020 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2021 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2022 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2023 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2024 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2025 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2026 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2027 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2028 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2029 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2030 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2031 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2032 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2033 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2034 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2035 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 6,145,258 | (26,984) | 2,018,018 | 14,096,625 | 1,796,805 | 156,199,931 | 313,156 | 282,974 | 12,349,598 | 193,175,381 |

(b) Costs from Table B-10 allocated to Empire West Side Irrigation District are reduced herein by \$31,588 in 1978; \$12,129 in 1980; \$15,173 in 1981; \$38,004 in 1983; \$43,033 in 1986; \$5,261 in 1995; \$63,318 in 1996 and \$124,667 in 1998 in accordance with letters of agreement with the district.

(c) Costs related to maximum annual entitlement of 15,000 acre-feet under Amendment No. 18 of the water supply contract with Kern County Water Agency.

TABLE B-14. Capital Costs of Transportation Facilities Allocated to Each Contractor

(in dollars)

Sheet 3 of 4

| Calendar Year | SOUTHERN CALIFORNIA AREA | | | | | | | | | |
|------------------|---|--|--|--|---------------------------|---|---------------------------|-------------------------------|--|---|
| | Antelope Valley- East Kern Water Agency | Castaic Lake Water Agency (d) | Coachella Valley Water District | Crestline- Lake Arrowhead Water Agency | Desert Water Agency | Littlerock Creek Irrigation District | Mojave Water Agency | Palmdale Water District | San Bernardino Valley Municipal Water District | San Gabriel Valley Municipal Water District |
| | [21] | [22] | [23] | [24] | [25] | [26] | [27] | [28] | [29] | [30] |
| 1952 | 3,158 | 1,042 | 850 | 254 | 1,402 | 70 | 1,695 | 418 | 6,079 | 1,550 |
| 1953 | 10,026 | 3,327 | 2,668 | 799 | 4,401 | 222 | 5,318 | 1,328 | 19,058 | 4,852 |
| 1954 | 12,742 | 4,193 | 3,465 | 1,031 | 5,714 | 285 | 6,908 | 1,691 | 24,608 | 6,290 |
| 1955 | 5,411 | 1,881 | 1,374 | 401 | 2,267 | 115 | 2,756 | 715 | 9,229 | 2,377 |
| 1956 | 9,775 | 3,590 | 2,196 | 612 | 3,622 | 191 | 4,449 | 1,267 | 13,138 | 3,438 |
| 1957 | 26,306 | 9,255 | 6,343 | 1,816 | 10,461 | 540 | 12,767 | 3,450 | 40,646 | 10,534 |
| 1958 | 49,204 | 17,599 | 11,581 | 3,290 | 19,099 | 991 | 23,360 | 6,414 | 72,708 | 18,898 |
| 1959 | 70,247 | 29,740 | 15,869 | 4,616 | 26,171 | 1,347 | 31,759 | 9,030 | 98,596 | 25,519 |
| 1960 | 84,552 | 38,760 | 22,068 | 6,797 | 36,395 | 1,547 | 43,260 | 10,772 | 147,170 | 37,469 |
| 1961 | 126,542 | 54,262 | 34,613 | 12,530 | 57,086 | 2,245 | 63,709 | 16,437 | 236,164 | 57,707 |
| 1962 | 198,558 | 85,352 | 43,719 | 13,861 | 72,102 | 3,344 | 84,709 | 24,943 | 253,435 | 64,330 |
| 1963 | 580,138 | 255,252 | 116,797 | 33,149 | 192,624 | 9,828 | 234,926 | 73,256 | 610,277 | 160,624 |
| 1964 | 1,094,365 | 501,858 | 209,462 | 55,445 | 345,446 | 18,442 | 429,605 | 137,769 | 1,026,066 | 276,118 |
| 1965 | 1,908,076 | 947,523 | 385,533 | 103,757 | 635,825 | 32,819 | 786,986 | 244,587 | 1,913,090 | 512,862 |
| 1966 | 3,960,302 | 2,150,972 | 812,655 | 215,858 | 1,340,235 | 69,325 | 1,664,584 | 517,269 | 3,943,586 | 1,062,417 |
| 1967 | 4,976,538 | 4,100,531 | 1,077,422 | 296,069 | 1,776,892 | 88,301 | 2,182,240 | 653,250 | 5,821,681 | 1,550,239 |
| 1968 | 5,924,474 | 3,998,942 | 1,350,742 | 368,156 | 2,227,646 | 107,350 | 2,738,009 | 783,940 | 7,982,824 | 2,122,940 |
| 1969 | 5,822,708 | 3,079,426 | 1,690,259 | 539,851 | 2,787,631 | 121,303 | 3,256,507 | 865,455 | 10,898,185 | 2,769,647 |
| 1970 | 5,032,959 | 3,277,778 | 2,050,788 | 695,345 | 3,382,251 | 106,381 | 3,872,367 | 736,775 | 13,795,809 | 3,457,109 |
| 1971 | 2,577,507 | 2,146,954 | 1,071,523 | 338,581 | 1,767,179 | 48,337 | 2,087,223 | 347,057 | 8,137,053 | 1,987,120 |
| 1972 | 973,436 | 283,257 | 331,759 | 92,079 | 547,138 | 19,134 | 668,550 | 134,360 | 2,691,137 | 697,957 |
| 1973 | 354,407 | 914,303 | 158,579 | 82,223 | 261,557 | 6,304 | 238,094 | 46,102 | 1,760,570 | 403,582 |
| 1974 | 451,450 | 280,861 | 259,175 | 74,113 | 427,433 | 8,143 | 518,453 | 59,145 | 1,617,394 | 425,927 |
| 1975 | 253,438 | 246,492 | 193,632 | 52,821 | 319,337 | 4,954 | 392,110 | 33,995 | 1,533,664 | 407,913 |
| 1976 | 237,539 | 255,238 | 136,751 | 37,235 | 225,529 | 4,245 | 277,807 | 31,002 | 962,280 | 255,901 |
| 1977 | 199,554 | 371,469 | 91,384 | 25,858 | 150,711 | 3,757 | 183,609 | 26,834 | 591,445 | 155,537 |
| 1978 | 302,111 | 470,176 | 78,573 | 22,226 | 129,584 | 5,233 | 157,815 | 38,654 | 428,989 | 111,769 |
| 1979 | 357,678 | 938,985 | 81,807 | 21,795 | 134,915 | 5,965 | 166,931 | 44,410 | 403,569 | 108,408 |
| 1980 | 1,867,517 | 1,777,294 | 423,755 | 113,166 | 698,855 | 32,435 | 864,104 | 240,899 | 2,040,757 | 548,085 |
| 1981 | (158,728) | 610,795 | (47,102) | (8,865) | (77,678) | (2,576) | (102,568) | (19,588) | (143,875) | (43,557) |
| 1982 | 1,557,934 | 861,928 | 298,770 | 78,903 | 492,728 | 26,237 | 613,587 | 196,672 | 1,421,407 | 388,261 |
| 1983 | 2,062,512 | 521,349 | 396,033 | 115,678 | 653,134 | 34,699 | 803,945 | 259,939 | 2,126,313 | 581,672 |
| 1984 | 1,518,361 | 295,783 | 297,559 | 85,097 | 490,731 | 27,272 | 606,124 | 188,562 | 1,546,628 | 423,408 |
| 1985 | 896,226 | 158,810 | 217,115 | 62,532 | 358,064 | 13,104 | 441,299 | 107,533 | 1,116,949 | 305,291 |
| 1986 | 841,555 | 104,860 | 221,194 | 58,152 | 364,790 | 9,038 | 454,702 | 93,309 | 1,048,625 | 286,302 |
| 1987 | 333,052 | 105,625 | 166,099 | 43,992 | 273,928 | 5,566 | 340,485 | 40,716 | 783,725 | 213,202 |
| 1988 | 259,234 | 174,155 | 65,831 | 22,723 | 108,570 | 3,384 | 128,339 | 26,743 | 429,498 | 113,644 |
| 1989 | 1,045,999 | 434,394 | 323,138 | 97,036 | 532,920 | 16,777 | 649,616 | 125,344 | 1,375,722 | 372,048 |
| 1990 | 678,053 | 374,313 | 332,566 | 97,789 | 548,468 | 7,335 | 672,344 | 67,179 | 1,509,745 | 409,710 |
| 1991 | 831,687 | 401,961 | 367,196 | 120,925 | 605,579 | 11,966 | 733,443 | 92,625 | 1,979,364 | 540,210 |
| 1992 | 633,272 | 356,952 | 270,826 | 131,328 | 446,647 | 9,556 | 501,634 | 76,760 | 2,093,387 | 573,386 |
| 1993 | 634,283 | 332,089 | 222,347 | 171,095 | 366,700 | 10,194 | 353,470 | 73,955 | 3,848,084 | 1,046,752 |
| 1994 | 467,409 | 165,607 | 132,599 | 93,839 | 218,685 | 7,255 | 218,494 | 53,209 | 2,347,599 | 637,733 |
| 1995 | 459,990 | 293,308 | 132,690 | 78,390 | 218,835 | 7,436 | 232,377 | 54,544 | 1,960,099 | 530,656 |
| 1996 | 299,764 | 206,742 | 110,520 | 44,965 | 182,270 | 4,885 | 211,872 | 35,808 | 4,024,655 | 972,829 |
| 1997 | 438,898 | 249,699 | 103,382 | 24,640 | 170,497 | 7,397 | 214,534 | 54,452 | 2,892,626 | 397,103 |
| 1998 | 234,379 | 202,650 | 62,492 | 41,136 | 103,063 | 3,989 | 106,009 | 29,551 | 3,683,353 | 303,255 |
| 1999 | 268,224 | 175,939 | 89,312 | 40,069 | 147,294 | 4,812 | 167,592 | 35,399 | 5,733,586 | 235,054 |
| 2000 | 139,035 | 77,889 | 54,795 | 23,903 | 90,369 | 2,665 | 103,194 | 19,150 | 14,346,200 | 171,107 |
| 2001 | 130,754 | 44,790 | 50,816 | 15,641 | 83,805 | 2,989 | 102,254 | 20,949 | 20,292,397 | 96,254 |
| 2002 | 167,056 | 107,515 | 34,405 | 11,395 | 56,741 | 2,453 | 68,208 | 18,551 | 9,841,901 | 126,427 |
| 2003 | (45,784) | (11,499) | 2,940 | 2,123 | 4,849 | (803) | 4,179 | (5,961) | 3,944,702 | 27,216 |
| 2004 | 63,046 | 38,831 | 20,124 | 5,569 | 33,188 | 1,133 | 41,043 | 8,244 | 2,148,313 | 38,381 |
| 2005 | 185,021 | 105,426 | 38,605 | 11,966 | 63,668 | 3,220 | 76,145 | 23,687 | 990,903 | 61,072 |
| 2006 | 320,886 | 240,800 | 65,890 | 24,564 | 108,669 | 5,400 | 121,883 | 40,414 | 2,027,147 | 110,705 |
| 2007 | 252,186 | 179,446 | 56,563 | 21,763 | 93,284 | 4,455 | 109,259 | 32,525 | 2,129,660 | 107,139 |
| 2008 | 116,700 | 156,951 | 63,252 | 58,963 | 104,330 | 2,083 | 67,262 | 15,151 | 3,336,641 | 254,509 |
| 2009 | 581,162 | 341,076 | 154,247 | 60,512 | 254,394 | 9,888 | 276,843 | 73,591 | 4,782,987 | 272,364 |
| 2010 | 681,047 | 294,453 | 177,699 | 51,054 | 293,064 | 11,517 | 354,606 | 86,093 | 1,221,374 | 278,964 |
| 2011 | 834,800 | 432,785 | 399,704 | 103,778 | 659,186 | 14,961 | 824,122 | 108,564 | 2,103,011 | 575,158 |
| 2012 | 447,375 | 474,459 | 285,385 | 74,915 | 470,654 | 8,531 | 587,680 | 60,099 | 1,520,516 | 415,790 |
| 2013 | 321,551 | 563,802 | 97,021 | 25,719 | 160,006 | 6,428 | 199,659 | 44,305 | 492,053 | 134,648 |
| 2014 | 269,796 | 732,500 | 80,304 | 20,982 | 132,436 | 5,293 | 165,499 | 36,827 | 398,678 | 109,077 |
| 2015 | 129,989 | 664,745 | 33,281 | 8,498 | 54,887 | 2,243 | 68,685 | 16,691 | 152,600 | 41,692 |
| 2016 | 47,955 | 348,492 | 9,639 | 2,495 | 15,896 | 842 | 19,841 | 6,284 | 45,416 | 12,286 |
| 2017 | 41,524 | 14,281 | 8,473 | 2,200 | 13,973 | 734 | 17,431 | 5,476 | 40,202 | 10,855 |
| 2018 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2019 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2020 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2021 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2022 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2023 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2024 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2025 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2026 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2027 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2028 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2029 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2030 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2031 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2032 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2033 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2034 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2035 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 55,456,921 | 37,080,013 | 16,061,052 | 5,139,198 | 26,488,132 | 995,511 | 31,555,701 | 7,294,576 | 176,671,399 | 28,377,722 |

(d) Costs from Table B-10 allocated to Castaic Lake Water Agency are reduced herein by \$14,088 in 1978 in accordance with a letter of agreement with the district.

TABLE B-14. Capital Costs of Transportation Facilities Allocated to Each Contractor

(in dollars)

Sheet 4 of 4

| Calendar Year | SOUTHERN CALIFORNIA AREA (continued) | | | | FEATHER RIVER AREA | | | | South Bay Area Future Contractor | GRAND TOTAL |
|------------------|--|--|---|---------------|----------------------------|-----------------------|----------------------------|---------|---|----------------|
| | San Gorgonio Pass Water Agency | The Metropolitan Water District of Southern California (e) | Ventura County Flood Control District | Total | City of Yuba City | County of Butte | Plumas County FC&WCD | Total | | |
| | [31] | [32] | [33] | [34] | [35] | [36] | [37] | [38] | [39] | [40] |
| 1952 | 962 | 69,020 | 370 | 86,870 | 0 | 0 | 0 | 0 | 59 | 99,352 |
| 1953 | 3,011 | 217,634 | 1,187 | 273,831 | 0 | 0 | 0 | 0 | 264 | 311,811 |
| 1954 | 3,904 | 279,967 | 1,496 | 352,294 | 0 | 0 | 0 | 0 | 766 | 402,141 |
| 1955 | 1,474 | 111,602 | 670 | 140,272 | 0 | 0 | 0 | 0 | 969 | 169,342 |
| 1956 | 2,127 | 179,335 | 1,299 | 225,039 | 0 | 0 | 0 | 0 | 9,172 | 351,549 |
| 1957 | 6,526 | 516,050 | 3,367 | 648,061 | 0 | 0 | 0 | 0 | 23,172 | 1,464,453 |
| 1958 | 11,701 | 945,684 | 6,390 | 1,186,919 | 0 | 0 | 2 | 2 | 32,888 | 2,286,626 |
| 1959 | 15,815 | 1,364,298 | 9,894 | 1,702,901 | 0 | 0 | 14 | 14 | 57,918 | 2,967,412 |
| 1960 | 23,307 | 1,914,521 | 12,798 | 2,379,416 | 0 | 0 | 28 | 28 | 123,202 | 4,660,834 |
| 1961 | 36,153 | 3,212,125 | 18,770 | 3,928,343 | 0 | 0 | 10 | 10 | 316,220 | 8,545,243 |
| 1962 | 40,012 | 3,543,471 | 29,069 | 4,456,905 | 0 | 0 | 32 | 32 | 228,202 | 8,875,170 |
| 1963 | 99,266 | 11,185,928 | 86,807 | 13,638,872 | 0 | 0 | 51 | 51 | 528,496 | 24,610,279 |
| 1964 | 170,012 | 18,065,455 | 164,709 | 22,494,752 | 0 | 0 | 7,791 | 7,791 | 590,034 | 41,736,063 |
| 1965 | 316,082 | 33,763,577 | 307,475 | 41,858,192 | 0 | 0 | 3,139 | 3,139 | 332,680 | 62,664,741 |
| 1966 | 654,194 | 74,485,027 | 681,898 | 91,558,322 | 0 | 0 | (48) | (48) | 783,728 | 129,110,328 |
| 1967 | 958,406 | 130,599,417 | 1,279,076 | 155,380,062 | 0 | 0 | 47 | 47 | 1,479,421 | 194,146,365 |
| 1968 | 1,314,841 | 147,502,290 | 1,360,687 | 177,782,841 | 0 | 0 | 51,573 | 51,573 | 1,254,192 | 197,978,910 |
| 1969 | 1,726,891 | 140,096,646 | 1,085,026 | 174,739,535 | 0 | 0 | 234,232 | 234,232 | 398,183 | 184,473,488 |
| 1970 | 2,160,122 | 161,983,078 | 1,147,609 | 201,698,371 | 0 | 0 | 16,227 | 16,227 | 74,028 | 207,082,650 |
| 1971 | 1,237,573 | 133,903,316 | 738,822 | 156,388,245 | 0 | 0 | 27,204 | 27,204 | 12,457 | 158,624,741 |
| 1972 | 434,507 | 43,931,880 | 66,878 | 50,872,072 | 0 | 0 | 9 | 9 | 13,182 | 51,936,917 |
| 1973 | 256,711 | 39,723,010 | 290,020 | 44,495,462 | 0 | 0 | 25 | 25 | 8,099 | 45,263,853 |
| 1974 | 264,349 | 18,896,593 | 86,362 | 23,369,398 | 0 | 0 | 45 | 45 | 28,570 | 24,402,165 |
| 1975 | 253,838 | 16,732,939 | 83,975 | 20,509,108 | 0 | 0 | 21 | 21 | 8,226 | 21,318,836 |
| 1976 | 158,850 | 13,545,451 | 84,623 | 16,212,451 | 0 | 0 | 51 | 51 | 16,486 | 17,492,912 |
| 1977 | 96,517 | 11,769,352 | 110,833 | 13,776,860 | 0 | 0 | 28 | 28 | 21,181 | 15,544,384 |
| 1978 | 69,152 | 15,781,696 | 174,876 | 17,770,854 | 0 | 0 | 38 | 38 | 28,876 | 19,073,476 |
| 1979 | 66,847 | 27,627,424 | 343,361 | 30,302,095 | 0 | 0 | 23 | 23 | 26,668 | 31,857,364 |
| 1980 | 337,811 | 59,493,774 | 641,586 | 69,080,038 | 0 | 0 | 26 | 26 | 59,169 | 74,974,703 |
| 1981 | (26,356) | 15,661,179 | 224,257 | 15,865,338 | 0 | 0 | 34 | 34 | (6,746) | 15,727,601 |
| 1982 | 238,792 | 30,873,857 | 316,107 | 37,365,183 | 0 | 0 | 11 | 11 | 16,086 | 39,705,931 |
| 1983 | 357,812 | 25,056,047 | 187,121 | 33,156,254 | 0 | 0 | 19 | 19 | 72,225 | 38,006,645 |
| 1984 | 260,327 | 16,317,441 | 103,160 | 22,160,453 | 0 | 0 | 26 | 26 | 83,252 | 30,414,884 |
| 1985 | 187,699 | 10,243,779 | 56,162 | 14,164,563 | 0 | 0 | 29 | 29 | 16,338 | 28,581,729 |
| 1986 | 176,057 | 8,365,310 | 34,777 | 12,058,671 | 0 | 0 | 31 | 31 | 16,248 | 41,035,900 |
| 1987 | 131,163 | 6,955,356 | 36,142 | 9,429,051 | 0 | 0 | 32 | 32 | 29,062 | 32,523,661 |
| 1988 | 70,260 | 6,626,545 | 57,117 | 8,086,043 | 0 | 0 | 55 | 55 | 50,083 | 18,140,689 |
| 1989 | 227,772 | 18,531,680 | 153,200 | 23,885,646 | 0 | 0 | 44 | 44 | 43,324 | 33,301,368 |
| 1990 | 251,185 | 17,430,869 | 125,376 | 22,504,932 | 0 | 0 | 63 | 63 | 96,419 | 34,453,746 |
| 1991 | 331,235 | 20,792,168 | 132,558 | 26,940,917 | 0 | 0 | 54 | 54 | 149,922 | 39,811,666 |
| 1992 | 351,492 | 21,196,762 | 116,999 | 26,759,001 | 0 | 0 | 42 | 42 | 80,900 | 35,041,234 |
| 1993 | 646,980 | 29,471,748 | 105,693 | 37,283,390 | 0 | 0 | 30 | 30 | 59,324 | 53,921,791 |
| 1994 | 394,936 | 16,392,019 | 50,941 | 21,180,325 | 0 | 0 | 14 | 14 | 34,208 | 74,225,376 |
| 1995 | 331,286 | 16,078,395 | 72,214 | 20,450,220 | 0 | 0 | 3 | 3 | 42,395 | 191,525,105 |
| 1996 | 1,079,630 | 23,237,696 | 49,282 | 30,460,918 | 0 | 0 | 0 | 0 | 21,388 | 188,829,047 |
| 1997 | 1,914,804 | 13,530,777 | 72,335 | 20,071,144 | 0 | 0 | 3 | 3 | 34,976 | 65,660,156 |
| 1998 | 3,219,136 | 11,284,364 | 65,745 | 19,339,122 | 0 | 0 | 7 | 7 | 11,234 | 32,689,230 |
| 1999 | 5,888,075 | 9,063,618 | 54,504 | 21,903,478 | 0 | 0 | 2 | 2 | 34,616 | 35,159,764 |
| 2000 | 16,301,848 | 5,393,221 | 24,010 | 36,747,386 | 0 | 0 | 24 | 24 | 16,912 | 43,646,872 |
| 2001 | 23,613,432 | 2,988,800 | 13,047 | 47,455,928 | 0 | 0 | 20 | 20 | 68,013 | 50,961,384 |
| 2002 | 11,145,573 | 5,297,703 | 34,824 | 26,912,752 | 0 | 0 | 14 | 14 | 380,629 | 37,572,525 |
| 2003 | 4,489,333 | 3,954,532 | (4,182) | 12,361,645 | 0 | 0 | 0 | 0 | 590,121 | 19,127,652 |
| 2004 | 2,289,249 | 4,276,877 | 13,219 | 8,977,217 | 0 | 0 | 0 | 0 | 156,413 | 14,405,897 |
| 2005 | 809,994 | 6,615,039 | 36,031 | 9,020,777 | 0 | 0 | 0 | 0 | 123,946 | 12,017,751 |
| 2006 | 1,803,791 | 13,692,480 | 88,228 | 18,650,857 | 0 | 0 | 5 | 5 | 240,448 | 22,913,748 |
| 2007 | 2,115,113 | 11,624,921 | 64,465 | 16,790,779 | 0 | 0 | 0 | 0 | 240,866 | 23,700,510 |
| 2008 | 2,901,874 | 11,253,240 | 54,304 | 18,285,260 | 0 | 0 | 4 | 4 | 442,647 | 33,149,921 |
| 2009 | 4,253,744 | 22,164,062 | 122,808 | 33,347,678 | 0 | 0 | 13 | 13 | 938,370 | 47,508,718 |
| 2010 | 173,111 | 61,055,064 | 105,450 | 64,783,496 | 0 | 0 | 303 | 303 | 5,163,454 | 91,783,970 |
| 2011 | 354,477 | 117,563,912 | 143,902 | 124,118,360 | 0 | 0 | 303 | 303 | 341,601 | 134,197,729 |
| 2012 | 256,266 | 110,269,362 | 146,825 | 115,017,857 | 0 | 0 | 303 | 303 | 77,718 | 120,514,589 |
| 2013 | 82,862 | 38,964,698 | 167,404 | 41,260,156 | 0 | 0 | 303 | 303 | 72,647 | 45,673,867 |
| 2014 | 67,119 | 33,389,279 | 217,668 | 35,625,458 | 0 | 0 | 303 | 303 | 54,139 | 39,183,329 |
| 2015 | 25,629 | 27,264,061 | 199,230 | 28,662,231 | 0 | 0 | 303 | 303 | 6,797 | 30,070,364 |
| 2016 | 7,557 | 14,227,743 | 103,492 | 14,847,938 | 0 | 0 | 303 | 303 | 4,885 | 14,853,126 |
| 2017 | 6,678 | 600,462 | 5,076 | 767,365 | 0 | 0 | 303 | 303 | 4,885 | 2,022,427 |
| 2018 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,243,912 |
| 2019 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2020 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2021 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2022 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2023 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2024 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2025 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2026 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2027 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2028 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2029 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2030 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2031 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2032 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2033 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2034 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2035 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 97,350,895 | 1,919,145,626 | 12,369,424 | 2,413,986,170 | 0 | 0 | 343,571 | 343,571 | 16,266,253 | 3,345,729,923 |

(e) Costs from Table B-10 allocated to MWDSC are reduced herein by \$16,425,374 in 1972 under provisions of Amendment No. 7 to its water contract.

TABLE B-15. Capital Cost Component of Transportation Charge for Each Contractor^{a b c}

(in dollars)

Sheet 1 of 4

| Calendar Year | NORTH BAY AREA | | | SOUTH BAY AREA | | | | CENTRAL COASTAL AREA | | |
|------------------|--------------------------|------------------------|-------------|--|--|--|-------------|--|--------------------------------------|---------------|
| | Napa County FC&WCD | Solano County WA | Total | Alameda County FC&WCD, Zone 7 | Alameda County Water District | Santa Clara Valley Water District | Total | San Luis Obispo County FC&WCD | Santa Barbara County FC&WCD | Total |
| | [1] | [2] | [3] | [4] | [5] | [6] | [7] | [8] | [9] | [10] |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 153,725 | 105,637 | 364,698 | 624,060 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 216,131 | 170,872 | 529,854 | 916,857 | 6,694 | 21,659 | 28,353 |
| 1965 | 0 | 0 | 0 | 284,275 | 259,858 | 899,072 | 1,443,206 | 13,751 | 36,017 | 49,768 |
| 1966 | 18,057 | 0 | 18,057 | 320,279 | 290,714 | 1,072,916 | 1,683,908 | 26,516 | 61,329 | 87,845 |
| 1967 | 41,560 | 0 | 41,560 | 391,134 | 320,885 | 1,187,229 | 1,899,248 | 56,451 | 118,225 | 174,675 |
| 1968 | 121,469 | 0 | 121,469 | 507,661 | 361,817 | 1,309,517 | 2,178,996 | 104,127 | 207,970 | 312,097 |
| 1969 | 165,236 | 0 | 165,236 | 609,792 | 397,257 | 1,411,239 | 2,418,289 | 122,005 | 242,348 | 364,353 |
| 1970 | 169,023 | 0 | 169,023 | 644,115 | 412,189 | 1,450,186 | 2,506,490 | 125,923 | 250,728 | 376,651 |
| 1971 | 171,231 | 0 | 171,231 | 650,946 | 415,305 | 1,457,088 | 2,523,340 | 128,362 | 256,289 | 384,651 |
| 1972 | 172,593 | 0 | 172,593 | 652,280 | 416,233 | 1,461,370 | 2,529,883 | 129,820 | 260,399 | 390,218 |
| 1973 | 173,593 | 31,353 | 204,946 | 653,625 | 416,883 | 1,464,608 | 2,535,117 | 130,802 | 262,956 | 393,758 |
| 1974 | 176,471 | 32,924 | 209,395 | 654,619 | 417,501 | 1,466,613 | 2,538,734 | 131,973 | 265,816 | 397,789 |
| 1975 | 184,914 | 36,276 | 221,190 | 656,934 | 418,743 | 1,470,336 | 2,546,013 | 133,248 | 268,942 | 402,189 |
| 1976 | 189,589 | 40,819 | 230,408 | 658,263 | 419,548 | 1,472,444 | 2,550,255 | 133,998 | 272,068 | 406,067 |
| 1977 | 192,530 | 45,078 | 237,608 | 660,938 | 421,313 | 1,478,024 | 2,560,275 | 135,711 | 278,710 | 414,421 |
| 1978 | 195,797 | 49,159 | 244,956 | 664,524 | 423,610 | 1,484,815 | 2,572,949 | 141,226 | 282,188 | 423,414 |
| 1979 | 199,326 | 53,320 | 252,646 | 669,831 | 426,971 | 1,493,720 | 2,590,522 | 142,317 | 287,474 | 439,790 |
| 1980 | 209,065 | 67,724 | 276,788 | 673,629 | 429,157 | 1,499,354 | 2,602,140 | 143,485 | 303,872 | 447,357 |
| 1981 | 222,528 | 87,377 | 309,905 | 683,786 | 435,488 | 1,514,863 | 2,634,137 | 148,742 | 327,440 | 476,182 |
| 1982 | 234,116 | 106,881 | 340,997 | 681,676 | 433,968 | 1,511,521 | 2,627,166 | 147,957 | 320,554 | 468,511 |
| 1983 | 262,076 | 151,207 | 413,284 | 682,928 | 434,392 | 1,512,899 | 2,630,220 | 148,166 | 317,556 | 465,722 |
| 1984 | 325,968 | 224,170 | 550,139 | 694,028 | 441,088 | 1,530,172 | 2,665,287 | 149,805 | 323,171 | 472,976 |
| 1985 | 455,691 | 364,186 | 819,877 | 706,447 | 448,265 | 1,548,089 | 2,702,802 | 151,610 | 328,656 | 480,266 |
| 1986 | 819,376 | 692,256 | 1,511,632 | 708,351 | 449,245 | 1,550,813 | 2,708,409 | 152,497 | 332,673 | 485,170 |
| 1987 | 1,360,258 | 1,558,749 | 2,919,007 | 710,938 | 450,862 | 1,555,321 | 2,717,121 | 154,756 | 348,361 | 503,117 |
| 1988 | 1,771,094 | 2,207,426 | 3,978,520 | 715,164 | 453,368 | 1,562,476 | 2,731,007 | 161,295 | 417,458 | 578,753 |
| 1989 | 1,890,890 | 2,432,396 | 4,323,286 | 724,053 | 459,184 | 1,578,141 | 2,761,378 | 169,399 | 494,091 | 663,490 |
| 1990 | 1,954,717 | 2,513,362 | 4,468,079 | 732,106 | 464,542 | 1,591,698 | 2,788,347 | 177,331 | 557,209 | 734,540 |
| 1991 | 1,977,962 | 2,556,601 | 4,534,563 | 749,210 | 476,306 | 1,624,504 | 2,850,019 | 188,990 | 639,036 | 828,026 |
| 1992 | 1,983,238 | 2,561,318 | 4,544,556 | 779,799 | 496,563 | 1,674,504 | 2,950,867 | 204,758 | 754,445 | 959,203 |
| 1993 | 1,986,275 | 2,564,623 | 4,550,898 | 794,155 | 505,611 | 1,698,036 | 2,997,802 | 223,986 | 941,012 | 1,164,998 |
| 1994 | 1,992,843 | 2,571,524 | 4,564,367 | 804,583 | 512,334 | 1,716,406 | 3,033,323 | 286,790 | 1,584,690 | 1,871,480 |
| 1995 | 1,996,698 | 2,576,028 | 4,572,726 | 809,057 | 515,474 | 1,728,828 | 3,053,359 | 517,259 | 4,094,617 | 4,611,877 |
| 1996 | 1,998,368 | 2,577,625 | 4,575,993 | 816,959 | 520,770 | 1,742,877 | 3,080,606 | 1,186,671 | 12,565,710 | 13,752,380 |
| 1997 | 1,999,484 | 2,578,675 | 4,578,160 | 821,008 | 523,416 | 1,749,897 | 3,094,321 | 1,808,036 | 20,572,449 | 22,380,486 |
| 1998 | 2,000,598 | 2,584,668 | 4,585,266 | 827,736 | 527,808 | 1,761,546 | 3,117,090 | 1,985,088 | 22,693,988 | 24,679,076 |
| 1999 | 2,001,577 | 2,585,880 | 4,587,456 | 829,964 | 529,163 | 1,765,088 | 3,124,215 | 2,034,690 | 23,287,310 | 25,322,000 |
| 2000 | 2,005,415 | 2,591,918 | 4,597,333 | 988,064 | 533,339 | 1,776,914 | 3,298,318 | 2,087,421 | 23,832,146 | 25,919,567 |
| 2001 | 2,324,840 | 2,780,111 | 5,104,951 | 1,120,839 | 534,995 | 1,781,529 | 3,437,363 | 2,115,456 | 24,149,673 | 26,265,129 |
| 2002 | 2,325,280 | 2,780,950 | 5,106,230 | 1,135,238 | 550,693 | 1,889,460 | 3,575,390 | 2,119,661 | 24,181,015 | 26,300,677 |
| 2003 | 2,326,624 | 2,783,759 | 5,110,383 | 1,219,911 | 620,730 | 2,235,455 | 4,076,096 | 2,123,381 | 24,203,172 | 26,326,553 |
| 2004 | 2,330,307 | 2,785,052 | 5,115,359 | 1,353,473 | 700,178 | 2,511,117 | 4,564,768 | 2,123,227 | 24,207,777 | 26,331,005 |
| 2005 | 2,340,852 | 2,786,390 | 5,127,242 | 1,390,257 | 721,129 | 2,759,734 | 4,871,121 | 2,123,766 | 24,210,573 | 26,334,339 |
| 2006 | 2,345,101 | 2,790,620 | 5,135,720 | 1,425,765 | 742,030 | 2,854,523 | 5,022,318 | 2,123,125 | 24,199,757 | 26,322,882 |
| 2007 | 2,408,128 | 2,792,002 | 5,200,129 | 1,496,919 | 783,306 | 2,953,849 | 5,234,073 | 2,123,497 | 24,203,520 | 26,327,018 |
| 2008 | 2,641,894 | 2,795,006 | 5,436,900 | 1,569,532 | 825,327 | 3,054,696 | 5,449,555 | 2,124,454 | 24,208,728 | 26,333,182 |
| 2009 | 3,223,149 | 2,799,336 | 6,022,484 | 1,705,462 | 903,884 | 3,242,737 | 5,852,083 | 2,125,798 | 24,214,247 | 26,340,046 |
| 2010 | 3,312,960 | 2,800,803 | 6,113,763 | 1,997,493 | 1,074,004 | 3,648,469 | 6,719,966 | 2,126,409 | 24,219,224 | 26,345,634 |
| 2011 | 3,318,186 | 2,804,490 | 6,122,676 | 2,690,215 | 1,349,060 | 4,325,479 | 8,364,754 | 2,128,723 | 24,294,183 | 26,422,906 |
| 2012 | 3,341,132 | 2,824,487 | 6,165,619 | 2,792,048 | 1,411,874 | 4,481,469 | 8,685,391 | 2,135,508 | 24,389,715 | 26,525,223 |
| 2013 | 3,364,658 | 2,844,989 | 6,209,647 | 2,636,672 | 1,319,629 | 4,155,089 | 8,111,390 | 2,141,354 | 24,485,397 | 26,626,751 |
| 2014 | 3,390,053 | 2,867,108 | 6,257,161 | 2,585,052 | 1,267,181 | 4,027,375 | 7,879,609 | 2,139,894 | 24,561,348 | 26,701,242 |
| 2015 | 3,409,550 | 2,884,152 | 6,293,702 | 2,523,733 | 1,187,897 | 3,686,720 | 7,398,350 | 2,136,806 | 24,641,102 | 26,777,908 |
| 2016 | 3,391,185 | 2,886,300 | 6,277,485 | 2,485,976 | 1,157,972 | 3,516,004 | 7,159,951 | 2,124,394 | 24,695,956 | 26,820,350 |
| 2017 | 3,365,982 | 2,887,863 | 6,253,845 | 2,412,313 | 1,128,384 | 3,403,819 | 6,944,516 | 2,094,674 | 24,721,139 | 26,815,813 |
| 2018 | 3,276,763 | 2,889,480 | 6,166,244 | 2,293,621 | 1,088,055 | 3,283,734 | 6,665,410 | 2,047,220 | 24,716,364 | 26,763,584 |
| 2019 | 3,227,029 | 2,889,480 | 6,116,509 | 2,188,132 | 1,052,615 | 3,182,012 | 6,422,759 | 2,029,342 | 24,681,986 | 26,711,329 |
| 2020 | 3,222,707 | 2,889,480 | 6,112,188 | 2,152,347 | 1,037,683 | 3,143,065 | 6,333,095 | 2,025,424 | 24,673,607 | 26,699,030 |
| 2021 | 3,220,177 | 2,889,480 | 6,109,657 | 2,145,151 | 1,034,567 | 3,136,163 | 6,315,881 | 2,022,986 | 24,668,046 | 26,691,031 |
| 2022 | 3,218,617 | 2,889,480 | 6,108,097 | 2,143,776 | 1,033,639 | 3,131,882 | 6,309,296 | 2,021,527 | 24,663,936 | 26,685,463 |
| 2023 | 3,217,474 | 2,855,962 | 6,073,436 | 2,142,367 | 1,032,989 | 3,128,643 | 6,303,999 | 2,020,545 | 24,661,379 | 26,681,924 |
| 2024 | 3,214,195 | 2,854,329 | 6,068,523 | 2,141,305 | 1,032,371 | 3,126,638 | 6,300,314 | 2,019,374 | 24,658,518 | 26,677,892 |
| 2025 | 3,204,582 | 2,850,753 | 6,055,335 | 2,138,970 | 1,031,129 | 3,122,915 | 6,293,014 | 2,018,099 | 24,655,393 | 26,673,492 |
| 2026 | 3,199,241 | 2,846,000 | 6,045,241 | 2,137,497 | 1,030,324 | 3,120,808 | 6,288,628 | 2,017,349 | 24,652,266 | 26,669,615 |
| 2027 | 3,195,870 | 2,841,567 | 6,037,437 | 2,134,510 | 1,028,559 | 3,115,227 | 6,278,296 | 2,015,636 | 24,645,625 | 26,661,261 |
| 2028 | 3,192,132 | 2,837,309 | 6,029,441 | 2,130,502 | 1,026,262 | 3,108,436 | 6,265,201 | 2,010,121 | 24,632,147 | 26,642,268 |
| 2029 | 3,188,095 | 2,832,943 | 6,021,038 | 2,124,507 | 1,022,901 | 3,099,532 | 6,246,940 | 2,009,030 | 24,626,861 | 26,635,891 |
| 2030 | 3,176,942 | 2,817,486 | 5,994,428 | 2,120,311 | 1,020,715 | 3,093,897 | 6,234,924 | 2,007,862 | 24,620,463 | 26,628,325 |
| 2031 | 3,161,531 | 2,796,426 | 5,957,957 | 2,108,833 | 1,014,384 | 3,078,388 | 6,201,605 | 2,002,605 | 24,596,895 | 26,599,500 |
| 2032 | 3,148,238 | 2,775,488 | 5,923,726 | 2,111,348 | 1,015,904 | 3,081,730 | 6,208,982 | 2,003,390 | 24,603,781 | 26,607,171 |
| 2033 | 3,116,188 | 2,728,052 | 5,844,240 | 2,110,107 | 1,015,480 | 3,080,352 | 6,205,939 | 2,003,181 | 24,606,778 | 26,609,960 |
| 2034 | 3,043,115 | 2,651,460 | 5,694,575 | 2,097,688 | 1,008,784 | 3,063,080 | 6,169,552 | 2,001,542 | 24,601,163 | 26,602,705 |
| 2035 | 2,895,019 | 2,505,204 | 5,400,223 | 2,083,846 | 1,001,607 | 3,045,162 | 6,130,615 | 1,999,737 | 24,595,679 | 26,595,416 |
| TOTAL | 137,897,419 | 134,977,321 | 272,874,740 | 96,028,431 | 50,941,919 | 166,336,869 | 313,307,218 | 86,296,755 | 975,776,976 | 1,062,073,731 |

(a) Unadjusted for prior overpayments or underpayments of charges.

(b) Determined at the current Project Interest Rate of 4.608 percent per annum.

(c) Reflects the transfers of permanent aqueduct capacity among contractors.

TABLE B-15. Capital Cost Component of Transportation Charge for Each Contractor^d

(in dollars)

Sheet 2 of 4

| Calendar Year | SAN JOAQUIN VALLEY AREA | | | | | | | | | |
|------------------|--------------------------------------|---|---|--------------------------------|------------------------------------|--------------|-----------------------|-------------------------------|---|-------------|
| | Dudley Ridge Water District | Empire West Side Irrigation District | Future Contractor San Joaquin Valley | Kern County Water Agency | | | County of Kings | Oak Flat Water District | Tulare Lake Basin Water Storage District | Total |
| | | | | Municipal and Industrial | Municipal and (d) Industrial | Agricultural | | | | |
| | [11] | [12] | [13] | [14] | [15] | [16] | [17] | [18] | [19] | [20] |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 2,724 | 0 | 0 | 0 | 0 | 0 | 0 | 2,724 |
| 1965 | 0 | 0 | 6,027 | 64,262 | 9,281 | 0 | 0 | 0 | 0 | 79,571 |
| 1966 | 0 | 0 | 12,035 | 120,217 | 17,068 | 0 | 0 | 0 | 0 | 149,319 |
| 1967 | 0 | 0 | 26,249 | 233,186 | 34,339 | 0 | 0 | 0 | 0 | 293,774 |
| 1968 | 77,838 | 1,769 | 48,934 | 335,663 | 48,951 | 425,467 | 9,404 | 4,761 | 65,734 | 1,018,520 |
| 1969 | 77,974 | 5,307 | 57,399 | 391,879 | 52,519 | 873,760 | 10,154 | 5,175 | 248,700 | 1,722,868 |
| 1970 | 85,458 | 5,307 | 59,206 | 423,268 | 53,905 | 1,062,752 | 10,442 | 5,382 | 184,043 | 1,889,763 |
| 1971 | 97,433 | 5,307 | 60,310 | 444,380 | 54,695 | 1,411,527 | 10,608 | 5,796 | 195,846 | 2,285,902 |
| 1972 | 108,865 | 5,307 | 60,925 | 454,082 | 55,057 | 2,113,638 | 10,690 | 11,107 | 604,178 | 3,423,850 |
| 1973 | 119,751 | 5,307 | 61,351 | 458,302 | 55,231 | 2,437,758 | 10,733 | 6,417 | 233,687 | 3,388,536 |
| 1974 | 181,748 | 5,307 | 61,870 | 460,337 | 55,331 | 2,729,925 | 10,766 | 7,185 | 387,882 | 3,900,352 |
| 1975 | 220,751 | 5,307 | 62,432 | 462,650 | 55,472 | 3,269,702 | 10,808 | 7,402 | 462,835 | 4,557,359 |
| 1976 | 168,310 | 5,307 | 62,700 | 464,506 | 55,661 | 3,524,708 | 10,849 | 8,360 | 331,102 | 4,631,503 |
| 1977 | 165,474 | 5,307 | 63,342 | 467,209 | 55,947 | 3,862,066 | 10,911 | 7,659 | 316,577 | 4,954,492 |
| 1978 | 176,905 | 0 | 65,775 | 469,066 | 56,138 | 4,293,014 | 11,016 | 8,073 | 339,650 | 5,419,638 |
| 1979 | 209,803 | 5,307 | 66,090 | 471,827 | 56,473 | 4,713,913 | 11,082 | 8,280 | 382,260 | 5,925,035 |
| 1980 | 223,171 | 5,307 | 66,378 | 474,569 | 56,810 | 5,143,946 | 11,153 | 11,798 | 384,723 | 6,377,855 |
| 1981 | 223,171 | 5,307 | 67,964 | 490,958 | 58,751 | 5,629,671 | 11,561 | 8,900 | 407,793 | 6,904,077 |
| 1982 | 223,171 | 5,307 | 67,975 | 488,679 | 58,689 | 6,077,962 | 11,548 | 9,314 | 430,328 | 7,372,972 |
| 1983 | 233,514 | 5,307 | 68,311 | 492,919 | 59,358 | 6,588,340 | 11,681 | 7,803 | 51,232 | 7,518,464 |
| 1984 | 245,489 | 5,307 | 68,928 | 498,543 | 60,064 | 6,911,547 | 11,830 | 9,935 | 335,951 | 8,147,594 |
| 1985 | 256,920 | 5,307 | 69,656 | 506,425 | 61,223 | 7,359,843 | 12,065 | 10,142 | 244,403 | 8,525,984 |
| 1986 | 268,350 | 5,307 | 69,944 | 508,820 | 61,568 | 7,489,038 | 12,137 | 10,556 | 521,547 | 8,947,266 |
| 1987 | 279,781 | 5,307 | 70,449 | 512,489 | 62,096 | 8,257,339 | 12,247 | 10,763 | 544,083 | 9,754,553 |
| 1988 | 291,213 | 5,307 | 70,809 | 515,348 | 62,506 | 8,680,065 | 12,330 | 11,177 | 566,620 | 10,215,375 |
| 1989 | 302,643 | 5,307 | 71,694 | 519,003 | 63,130 | 8,985,014 | 12,497 | 11,591 | 589,691 | 10,560,570 |
| 1990 | 157,037 | 5,307 | 73,130 | 537,356 | 65,369 | 9,301,831 | 12,932 | 11,798 | 635,838 | 10,800,597 |
| 1991 | 290,727 | 5,307 | 75,772 | 566,393 | 69,944 | 9,301,831 | 13,757 | 11,798 | 635,838 | 10,971,368 |
| 1992 | 314,074 | 5,307 | 78,965 | 597,071 | 74,793 | 9,301,831 | 14,752 | 11,798 | 635,838 | 11,034,429 |
| 1993 | 314,074 | 5,307 | 80,456 | 609,930 | 76,633 | 9,301,831 | 15,120 | 11,798 | 635,838 | 11,050,987 |
| 1994 | 314,074 | 5,307 | 82,079 | 619,299 | 77,912 | 9,301,831 | 15,392 | 11,798 | 635,838 | 11,063,530 |
| 1995 | 314,074 | 5,307 | 83,371 | 626,034 | 78,865 | 9,301,831 | 15,603 | 11,798 | 635,838 | 11,072,722 |
| 1996 | 290,510 | 5,307 | 87,340 | 635,184 | 80,196 | 8,982,538 | 15,956 | 11,798 | 635,838 | 10,744,667 |
| 1997 | 290,510 | 5,307 | 90,203 | 638,976 | 80,681 | 8,916,717 | 16,128 | 11,798 | 635,838 | 10,686,158 |
| 1998 | 290,509 | 5,307 | 92,911 | 652,398 | 82,706 | 8,656,452 | 16,583 | 11,798 | 635,838 | 10,444,502 |
| 1999 | 290,509 | 5,307 | 94,208 | 659,302 | 83,752 | 8,656,452 | 16,818 | 11,798 | 635,838 | 10,453,985 |
| 2000 | 290,509 | 5,307 | 95,721 | 667,421 | 84,982 | 8,008,984 | 17,090 | 11,798 | 635,838 | 9,817,650 |
| 2001 | 290,509 | 5,307 | 96,285 | 670,045 | 85,327 | 7,878,831 | 17,167 | 11,798 | 635,838 | 9,691,107 |
| 2002 | 312,547 | 5,307 | 96,742 | 672,142 | 85,621 | 7,878,831 | 17,231 | 11,798 | 596,917 | 9,677,137 |
| 2003 | 312,547 | 5,307 | 97,685 | 679,971 | 86,802 | 7,878,831 | 17,471 | 11,798 | 594,683 | 9,685,095 |
| 2004 | 312,547 | 5,307 | 97,355 | 675,421 | 86,020 | 7,866,728 | 44,842 | 11,798 | 511,847 | 9,611,865 |
| 2005 | 312,547 | 5,307 | 97,506 | 676,453 | 86,146 | 7,866,728 | 44,869 | 11,798 | 511,847 | 9,613,201 |
| 2006 | 312,547 | 5,307 | 97,859 | 679,691 | 86,610 | 7,866,728 | 46,644 | 11,798 | 510,157 | 9,617,342 |
| 2007 | 312,547 | 5,307 | 97,907 | 680,783 | 86,658 | 7,866,728 | 46,654 | 11,798 | 510,157 | 9,618,539 |
| 2008 | 312,547 | 5,307 | 98,135 | 682,706 | 86,859 | 7,866,728 | 46,695 | 11,798 | 510,157 | 9,620,933 |
| 2009 | 312,547 | 5,307 | 98,635 | 686,894 | 87,507 | 7,866,728 | 46,829 | 11,798 | 510,157 | 9,626,402 |
| 2010 | 274,392 | 5,307 | 98,864 | 690,261 | 87,804 | 7,699,146 | 46,889 | 11,798 | 471,518 | 9,385,979 |
| 2011 | 297,957 | 5,307 | 99,852 | 701,433 | 89,372 | 8,074,261 | 47,207 | 11,798 | 471,518 | 9,798,706 |
| 2012 | 297,957 | 5,307 | 102,247 | 719,617 | 91,927 | 8,074,261 | 47,741 | 11,798 | 471,518 | 9,822,374 |
| 2013 | 297,957 | 5,307 | 104,182 | 731,959 | 93,661 | 8,074,261 | 48,107 | 11,798 | 471,518 | 9,838,749 |
| 2014 | 297,957 | 5,307 | 103,021 | 739,257 | 94,580 | 8,074,261 | 48,309 | 11,798 | 471,518 | 9,846,007 |
| 2015 | 281,631 | 5,307 | 100,895 | 680,709 | 85,989 | 8,074,261 | 48,460 | 11,798 | 471,518 | 9,760,569 |
| 2016 | 281,631 | 5,307 | 94,985 | 626,247 | 78,318 | 8,074,261 | 48,481 | 11,798 | 471,518 | 9,692,546 |
| 2017 | 281,631 | 5,307 | 80,829 | 514,156 | 61,148 | 8,074,261 | 48,499 | 11,798 | 471,518 | 9,549,146 |
| 2018 | 281,631 | 5,307 | 58,203 | 412,516 | 46,641 | 8,074,261 | 39,113 | 11,798 | 471,518 | 9,400,989 |
| 2019 | 281,631 | 5,307 | 49,738 | 356,301 | 43,073 | 8,074,261 | 38,363 | 11,798 | 471,518 | 9,331,989 |
| 2020 | 259,862 | 5,307 | 47,932 | 324,911 | 41,687 | 8,074,261 | 38,075 | 11,798 | 471,518 | 9,275,351 |
| 2021 | 259,862 | 5,307 | 46,828 | 303,799 | 40,897 | 8,074,261 | 37,909 | 11,798 | 471,518 | 9,252,179 |
| 2022 | 259,862 | 5,307 | 46,212 | 294,098 | 40,535 | 8,074,261 | 37,827 | 11,798 | 471,518 | 9,241,417 |
| 2023 | 259,862 | 5,307 | 45,787 | 289,878 | 40,361 | 8,074,261 | 37,784 | 11,798 | 471,518 | 9,236,556 |
| 2024 | 259,862 | 5,307 | 45,267 | 287,842 | 40,260 | 8,074,261 | 37,750 | 11,798 | 471,518 | 9,233,866 |
| 2025 | 259,862 | 5,307 | 44,705 | 285,530 | 40,120 | 8,074,261 | 37,709 | 11,798 | 471,518 | 9,230,809 |
| 2026 | 259,862 | 5,307 | 44,438 | 283,673 | 39,931 | 8,074,261 | 37,668 | 11,798 | 471,518 | 9,228,456 |
| 2027 | 259,862 | 5,307 | 43,796 | 280,970 | 39,645 | 8,074,261 | 37,606 | 11,798 | 471,518 | 9,224,763 |
| 2028 | 259,862 | 5,307 | 41,362 | 279,113 | 39,453 | 8,074,261 | 37,501 | 11,798 | 471,518 | 9,220,176 |
| 2029 | 259,862 | 5,307 | 41,048 | 276,353 | 39,119 | 8,074,261 | 37,435 | 11,798 | 471,518 | 9,216,700 |
| 2030 | 259,862 | 5,307 | 40,759 | 273,610 | 38,782 | 8,074,261 | 37,364 | 11,798 | 471,518 | 9,213,261 |
| 2031 | 259,862 | 5,307 | 39,173 | 257,221 | 36,841 | 8,074,261 | 36,955 | 11,798 | 471,518 | 9,192,937 |
| 2032 | 259,862 | 5,307 | 39,163 | 259,501 | 36,903 | 8,074,261 | 36,969 | 11,798 | 471,518 | 9,195,282 |
| 2033 | 259,862 | 5,307 | 38,827 | 255,261 | 36,234 | 8,074,261 | 36,836 | 11,798 | 471,518 | 9,189,903 |
| 2034 | 259,862 | 5,307 | 38,209 | 249,637 | 35,528 | 8,074,261 | 36,687 | 11,798 | 471,518 | 9,182,807 |
| 2035 | 259,862 | 5,307 | 37,481 | 241,755 | 34,369 | 8,074,261 | 36,452 | 11,798 | 471,518 | 9,172,803 |
| TOTAL | 17,217,392 | 352,031 | 4,855,543 | 34,257,670 | 4,346,821 | 481,265,656 | 1,804,740 | 730,284 | 31,974,311 | 576,804,448 |

(d) Charges under Amendment No. 18 of the water supply contract with Kern County Water Agency.

TABLE B-15. Capital Cost Component of Transportation Charge for Each Contractor

(in dollars)

Sheet 3 of 4

| Calendar Year | SOUTHERN CALIFORNIA AREA | | | | | | | | | |
|------------------|--|------------------------------------|--|---|---------------------------|---|---------------------------|-------------------------------|---|--|
| | Antelope Valley- East Kern Water Agency | Castaic Lake Water Agency | Coachella Valley Water District | Crestline- Lake Arrowhead Water Agency | Desert Water Agency | Littlerock Creek Irrigation District | Mojave Water Agency | Palmdale Water District | San Bernardino Valley Municipal Water District | San Gabriel Valley Municipal Water District |
| | [21] | [22] | [23] | [24] | [25] | [26] | [27] | [28] | [29] | [30] |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1963 | 33,841 | 0 | 0 | 0 | 725 | 0 | 0 | 0 | 51,711 | 0 |
| 1964 | 63,637 | 27,438 | 19,535 | 4,368 | 38,197 | 1,142 | 29,747 | 8,202 | 82,782 | 34,973 |
| 1965 | 119,942 | 52,989 | 34,336 | 7,191 | 42,687 | 2,081 | 52,687 | 15,217 | 135,023 | 35,333 |
| 1966 | 218,209 | 101,232 | 62,456 | 12,474 | 76,861 | 3,752 | 94,947 | 27,670 | 232,426 | 61,445 |
| 1967 | 422,183 | 210,746 | 121,230 | 23,464 | 148,792 | 7,282 | 184,188 | 54,006 | 433,210 | 115,536 |
| 1968 | 679,489 | 419,689 | 206,886 | 38,538 | 245,799 | 11,777 | 303,771 | 87,265 | 729,615 | 194,465 |
| 1969 | 987,174 | 623,470 | 318,481 | 57,283 | 368,308 | 17,243 | 454,767 | 127,179 | 1,136,052 | 302,553 |
| 1970 | 1,289,738 | 780,331 | 450,887 | 84,769 | 520,077 | 23,419 | 632,764 | 171,243 | 1,690,922 | 443,566 |
| 1971 | 1,553,034 | 947,352 | 594,913 | 120,171 | 700,691 | 28,835 | 840,579 | 208,755 | 2,393,322 | 619,582 |
| 1972 | 1,688,468 | 1,056,940 | 670,885 | 137,410 | 795,212 | 31,296 | 953,238 | 226,425 | 2,807,612 | 720,754 |
| 1973 | 1,739,344 | 1,071,492 | 695,843 | 142,098 | 824,782 | 32,271 | 989,755 | 233,266 | 2,944,628 | 756,290 |
| 1974 | 1,757,898 | 1,118,159 | 707,053 | 146,284 | 838,765 | 32,592 | 1,003,041 | 235,613 | 3,034,266 | 776,838 |
| 1975 | 1,781,890 | 1,132,672 | 724,065 | 150,058 | 861,337 | 33,006 | 1,031,088 | 238,624 | 3,116,614 | 798,523 |
| 1976 | 1,795,495 | 1,145,322 | 735,878 | 152,747 | 878,011 | 33,258 | 1,051,865 | 240,355 | 3,194,699 | 819,292 |
| 1977 | 1,808,101 | 1,158,452 | 744,482 | 154,643 | 889,842 | 33,474 | 1,066,851 | 241,933 | 3,243,692 | 832,321 |
| 1978 | 1,818,598 | 1,177,536 | 750,224 | 155,959 | 897,746 | 33,666 | 1,077,006 | 243,300 | 3,273,865 | 840,240 |
| 1979 | 1,834,311 | 1,201,640 | 755,900 | 157,091 | 904,700 | 33,932 | 1,085,987 | 245,268 | 3,295,647 | 845,930 |
| 1980 | 1,852,895 | 1,249,619 | 761,770 | 158,201 | 911,931 | 34,236 | 1,095,456 | 247,529 | 3,316,194 | 851,450 |
| 1981 | 1,949,874 | 1,340,301 | 796,131 | 163,962 | 950,227 | 35,887 | 1,143,353 | 259,794 | 3,420,097 | 879,355 |
| 1982 | 1,941,548 | 1,371,576 | 789,469 | 163,511 | 945,367 | 35,756 | 1,137,571 | 258,797 | 3,412,772 | 877,137 |
| 1983 | 2,022,454 | 1,415,663 | 809,062 | 167,528 | 971,384 | 37,092 | 1,170,571 | 268,810 | 3,485,141 | 896,905 |
| 1984 | 2,129,580 | 1,442,334 | 834,299 | 173,418 | 1,005,714 | 38,859 | 1,209,401 | 282,045 | 3,593,400 | 926,520 |
| 1985 | 2,208,298 | 1,457,571 | 851,450 | 177,750 | 1,031,124 | 40,247 | 1,241,330 | 291,645 | 3,672,145 | 948,078 |
| 1986 | 2,254,872 | 1,465,833 | 863,601 | 180,934 | 1,049,588 | 40,914 | 1,273,404 | 297,120 | 3,729,014 | 963,621 |
| 1987 | 2,298,755 | 1,471,381 | 875,983 | 183,911 | 1,068,487 | 41,377 | 1,288,730 | 301,897 | 3,782,694 | 978,277 |
| 1988 | 2,316,531 | 1,476,986 | 885,228 | 186,176 | 1,082,737 | 41,664 | 1,306,955 | 303,993 | 3,823,044 | 989,254 |
| 1989 | 2,330,196 | 1,486,128 | 889,349 | 187,353 | 1,088,511 | 41,839 | 1,314,165 | 305,378 | 3,845,289 | 995,140 |
| 1990 | 2,385,922 | 1,508,895 | 912,696 | 192,411 | 1,117,670 | 42,713 | 1,350,087 | 311,911 | 3,916,996 | 1,014,533 |
| 1991 | 2,422,614 | 1,528,536 | 932,364 | 197,542 | 1,146,919 | 43,098 | 1,385,938 | 315,436 | 3,996,215 | 1,036,031 |
| 1992 | 2,467,585 | 1,549,776 | 953,174 | 203,932 | 1,179,217 | 43,730 | 1,425,056 | 320,331 | 4,100,806 | 1,064,576 |
| 1993 | 2,502,151 | 1,568,777 | 969,478 | 210,923 | 1,203,394 | 44,239 | 1,452,247 | 324,417 | 4,212,242 | 1,095,099 |
| 1994 | 2,536,846 | 1,586,594 | 983,675 | 220,102 | 1,223,549 | 44,786 | 1,471,796 | 328,384 | 4,418,688 | 1,151,256 |
| 1995 | 2,562,553 | 1,595,552 | 992,274 | 225,178 | 1,235,681 | 45,178 | 1,483,983 | 331,262 | 4,545,673 | 1,185,752 |
| 1996 | 2,588,067 | 1,611,555 | 1,001,528 | 229,455 | 1,248,048 | 45,584 | 1,497,181 | 334,239 | 4,652,620 | 1,214,705 |
| 1997 | 2,605,018 | 1,622,939 | 1,009,801 | 231,931 | 1,258,549 | 45,853 | 1,509,412 | 336,210 | 4,674,232 | 1,268,273 |
| 1998 | 2,629,728 | 1,636,822 | 1,017,249 | 233,300 | 1,268,389 | 46,264 | 2,034,622 | 339,238 | 5,035,055 | 1,290,351 |
| 1999 | 2,643,049 | 1,648,204 | 1,021,809 | 235,611 | 1,274,401 | 46,489 | 2,041,778 | 340,897 | 5,241,941 | 1,307,384 |
| 2000 | 2,658,523 | 2,801,946 | 1,027,872 | 237,886 | 1,282,974 | 46,762 | 2,052,420 | 404,774 | 5,567,477 | 1,320,729 |
| 2001 | 2,666,701 | 2,807,886 | 1,031,753 | 239,259 | 1,288,320 | 46,915 | 2,059,178 | 405,977 | 6,391,357 | 1,330,556 |
| 2002 | 2,691,022 | 2,811,178 | 1,035,116 | 240,168 | 1,293,278 | 47,089 | 2,065,582 | 407,251 | 7,570,875 | 1,336,151 |
| 2003 | 2,700,951 | 2,818,818 | 1,037,874 | 240,839 | 1,296,774 | 47,233 | 2,070,420 | 408,443 | 8,150,310 | 1,343,594 |
| 2004 | 2,698,314 | 2,818,734 | 1,092,947 | 240,965 | 1,297,145 | 47,185 | 2,071,107 | 408,142 | 8,385,722 | 1,345,218 |
| 2005 | 2,702,222 | 2,822,152 | 6,704,699 | 241,303 | 2,057,036 | 47,254 | 2,074,171 | 408,715 | 8,515,785 | 1,347,542 |
| 2006 | 2,713,775 | 2,831,584 | 6,771,185 | 242,038 | 2,069,728 | 47,452 | 2,080,600 | 410,396 | 8,576,700 | 1,351,296 |
| 2007 | 2,734,233 | 2,856,807 | 6,900,260 | 243,573 | 2,093,690 | 47,789 | 2,092,580 | 413,485 | 8,703,354 | 1,358,213 |
| 2008 | 2,750,582 | 2,875,274 | 7,024,663 | 244,956 | 2,116,144 | 48,072 | 2,102,583 | 415,946 | 8,838,730 | 1,365,024 |
| 2009 | 2,758,249 | 2,889,856 | 7,114,081 | 248,774 | 2,134,466 | 48,207 | 2,107,575 | 417,007 | 9,054,764 | 1,381,502 |
| 2010 | 2,797,493 | 2,926,350 | 7,492,381 | 252,769 | 2,232,114 | 48,860 | 2,171,922 | 422,895 | 9,370,571 | 1,399,485 |
| 2011 | 2,844,367 | 2,957,331 | 8,610,626 | 256,212 | 2,401,825 | 49,636 | 2,203,584 | 429,699 | 9,452,920 | 1,418,294 |
| 2012 | 2,903,873 | 2,998,963 | 10,887,017 | 263,367 | 2,751,574 | 50,668 | 2,268,314 | 438,194 | 9,597,917 | 1,457,949 |
| 2013 | 2,902,953 | 3,040,220 | 12,961,562 | 268,657 | 3,048,441 | 51,270 | 2,312,999 | 442,838 | 9,653,581 | 1,474,215 |
| 2014 | 2,896,916 | 3,053,741 | 13,385,342 | 266,152 | 3,109,022 | 50,594 | 2,296,063 | 437,500 | 9,658,160 | 1,475,793 |
| 2015 | 2,861,121 | 3,085,813 | 13,560,720 | 264,892 | 3,125,480 | 50,049 | 2,335,850 | 432,982 | 9,635,613 | 1,469,858 |
| 2016 | 2,773,064 | 3,087,244 | 13,588,630 | 260,261 | 3,102,865 | 48,550 | 2,292,577 | 420,914 | 9,549,918 | 1,446,945 |
| 2017 | 2,572,955 | 2,984,570 | 13,425,113 | 249,469 | 3,017,980 | 45,087 | 2,188,839 | 393,049 | 9,352,732 | 1,393,827 |
| 2018 | 2,319,112 | 2,698,509 | 13,092,237 | 234,575 | 2,888,661 | 40,652 | 2,041,856 | 356,343 | 9,059,624 | 1,315,788 |
| 2019 | 2,011,427 | 2,402,562 | 12,636,417 | 215,831 | 2,719,656 | 35,186 | 1,848,787 | 310,250 | 8,653,186 | 1,207,701 |
| 2020 | 1,708,863 | 2,171,925 | 12,086,966 | 188,345 | 2,511,554 | 29,010 | 1,672,002 | 259,334 | 8,098,316 | 1,066,687 |
| 2021 | 1,445,566 | 1,924,924 | 11,414,956 | 152,942 | 2,259,623 | 23,594 | 1,419,133 | 215,958 | 7,395,917 | 890,672 |
| 2022 | 1,310,133 | 1,765,439 | 10,507,305 | 135,704 | 2,052,763 | 21,133 | 1,282,740 | 195,114 | 6,981,627 | 789,500 |
| 2023 | 1,259,257 | 1,757,717 | 9,803,768 | 131,015 | 1,931,534 | 20,159 | 1,237,357 | 187,800 | 6,844,610 | 753,964 |
| 2024 | 1,240,703 | 1,698,862 | 9,687,237 | 126,829 | 1,903,325 | 19,838 | 1,220,827 | 184,270 | 6,754,973 | 733,416 |
| 2025 | 1,216,711 | 1,681,004 | 9,572,020 | 123,056 | 1,867,487 | 19,423 | 1,189,066 | 180,695 | 6,672,625 | 711,730 |
| 2026 | 1,203,106 | 1,662,761 | 9,468,184 | 120,366 | 1,838,384 | 19,171 | 1,166,357 | 178,677 | 6,594,540 | 690,962 |
| 2027 | 1,190,500 | 1,644,256 | 9,391,856 | 118,471 | 1,817,405 | 18,955 | 1,149,924 | 176,865 | 6,545,546 | 677,933 |
| 2028 | 1,180,003 | 1,616,429 | 9,354,650 | 117,154 | 1,805,250 | 18,764 | 1,139,066 | 175,349 | 6,515,434 | 670,014 |
| 2029 | 1,164,290 | 1,578,128 | 9,322,331 | 116,022 | 1,794,698 | 18,497 | 1,128,684 | 173,137 | 6,493,592 | 664,323 |
| 2030 | 1,145,706 | 1,500,938 | 9,295,752 | 114,913 | 1,784,670 | 18,193 | 1,117,788 | 170,624 | 6,473,045 | 658,804 |
| 2031 | 1,048,727 | 1,357,931 | 9,157,185 | 109,151 | 1,732,298 | 16,542 | 1,055,811 | 156,466 | 6,369,142 | 630,899 |
| 2032 | 1,057,053 | 1,306,442 | 9,169,984 | 109,602 | 1,737,987 | 16,673 | 1,067,036 | 158,098 | 6,376,467 | 633,116 |
| 2033 | 976,147 | 1,233,914 | 9,088,479 | 105,585 | 1,703,608 | 15,337 | 1,029,637 | 147,436 | 6,304,097 | 613,348 |
| 2034 | 869,021 | 1,191,690 | 8,975,959 | 99,696 | 1,657,487 | 13,571 | 981,574 | 133,451 | 6,195,838 | 583,733 |
| 2035 | 790,303 | 1,169,976 | 8,892,059 | 95,363 | 1,623,061 | 12,182 | 947,901 | 123,557 | 6,117,093 | 562,176 |
| TOTAL | 139,003,826 | 125,092,372 | 340,312,630 | 12,383,835 | 106,641,727 | 2,440,385 | 100,227,229 | 19,704,562 | 393,342,448 | 68,002,292 |

TABLE B-15. Capital Cost Component of Transportation Charge for Each Contractor

(in dollars)

Sheet 4 of 4

| Calendar Year | SOUTHERN CALIFORNIA AREA (continued) | | | | FEATHER RIVER AREA | | | | South Bay Area Future Contractor | GRAND TOTAL |
|------------------|---|---|--|---------------|----------------------------|-----------------------|----------------------------|---------|---|----------------|
| | San Gorgonio Pass Water Agency | The Metropolitan Water District of Southern California | Ventura County Flood Control District | Total | City of Yuba City | County of Butte | Plumas County FC&WCD | Total | | |
| | [31] | [32] | [33] | [34] | [35] | [36] | [37] | [38] | [39] | [40] |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 690,539 | 0 | 776,816 | 0 | 0 | 0 | 0 | 0 | 1,400,876 |
| 1964 | 21,728 | 1,260,042 | 9,374 | 1,601,166 | 0 | 0 | 0 | 0 | 0 | 2,549,100 |
| 1965 | 21,859 | 2,179,810 | 17,760 | 2,716,916 | 0 | 0 | 405 | 405 | 0 | 4,289,866 |
| 1966 | 37,952 | 3,898,819 | 33,415 | 4,861,658 | 0 | 0 | 564 | 564 | 0 | 6,801,351 |
| 1967 | 71,260 | 7,691,085 | 68,133 | 9,551,114 | 0 | 0 | 562 | 562 | 0 | 11,960,933 |
| 1968 | 120,056 | 14,340,331 | 133,256 | 17,510,938 | 0 | 0 | 564 | 564 | 0 | 21,142,585 |
| 1969 | 187,000 | 21,850,137 | 202,534 | 26,632,181 | 0 | 0 | 3,190 | 3,190 | 0 | 31,306,116 |
| 1970 | 274,923 | 28,982,865 | 257,777 | 35,603,281 | 0 | 0 | 15,116 | 15,116 | 0 | 40,560,324 |
| 1971 | 384,903 | 37,229,879 | 316,207 | 45,938,225 | 0 | 0 | 15,942 | 15,942 | 0 | 51,319,289 |
| 1972 | 447,913 | 44,047,132 | 353,823 | 53,937,108 | 0 | 0 | 17,327 | 17,327 | 0 | 60,470,979 |
| 1973 | 470,035 | 46,283,635 | 357,228 | 56,540,666 | 0 | 0 | 17,327 | 17,327 | 0 | 63,080,350 |
| 1974 | 483,106 | 48,306,053 | 371,994 | 58,811,661 | 0 | 0 | 17,329 | 17,329 | 0 | 65,875,260 |
| 1975 | 496,565 | 49,268,119 | 376,391 | 60,008,951 | 0 | 0 | 17,331 | 17,331 | 0 | 67,753,034 |
| 1976 | 509,489 | 50,120,026 | 380,667 | 61,057,104 | 0 | 0 | 17,332 | 17,332 | 0 | 68,892,669 |
| 1977 | 517,576 | 50,809,655 | 384,975 | 61,885,998 | 0 | 0 | 17,335 | 17,335 | 0 | 70,070,128 |
| 1978 | 522,490 | 51,408,868 | 390,618 | 62,590,056 | 0 | 0 | 17,336 | 17,336 | 0 | 71,278,348 |
| 1979 | 526,011 | 52,212,368 | 399,522 | 63,498,306 | 0 | 0 | 17,338 | 17,338 | 0 | 72,723,637 |
| 1980 | 529,415 | 53,618,983 | 417,004 | 65,044,680 | 0 | 0 | 17,339 | 17,339 | 0 | 74,766,158 |
| 1981 | 546,614 | 56,648,010 | 449,669 | 68,583,276 | 0 | 0 | 17,341 | 17,341 | 0 | 78,924,916 |
| 1982 | 545,272 | 57,445,385 | 461,087 | 69,385,248 | 0 | 0 | 17,342 | 17,342 | 0 | 80,212,236 |
| 1983 | 557,430 | 59,017,274 | 477,181 | 71,296,496 | 0 | 0 | 17,343 | 17,343 | 0 | 82,341,529 |
| 1984 | 575,647 | 60,292,946 | 486,708 | 72,990,872 | 0 | 0 | 17,344 | 17,344 | 0 | 84,844,211 |
| 1985 | 588,902 | 61,123,708 | 491,961 | 74,124,209 | 0 | 0 | 17,345 | 17,345 | 0 | 86,670,483 |
| 1986 | 598,458 | 61,645,242 | 494,820 | 74,857,422 | 0 | 0 | 17,347 | 17,347 | 0 | 88,527,246 |
| 1987 | 607,471 | 62,073,455 | 496,600 | 75,469,019 | 0 | 0 | 17,348 | 17,348 | 0 | 91,380,165 |
| 1988 | 614,224 | 62,431,535 | 498,461 | 75,956,787 | 0 | 0 | 17,350 | 17,350 | 0 | 93,477,791 |
| 1989 | 617,863 | 62,774,747 | 501,420 | 76,377,378 | 0 | 0 | 17,353 | 17,353 | 0 | 94,703,454 |
| 1990 | 629,735 | 63,740,657 | 509,405 | 77,633,631 | 0 | 0 | 17,355 | 17,355 | 0 | 96,442,548 |
| 1991 | 642,915 | 64,655,258 | 515,983 | 78,818,848 | 0 | 0 | 17,358 | 17,358 | 0 | 98,020,183 |
| 1992 | 660,418 | 65,753,902 | 522,988 | 80,245,489 | 0 | 0 | 17,361 | 17,361 | 0 | 99,751,904 |
| 1993 | 679,129 | 66,882,231 | 529,216 | 81,673,542 | 0 | 0 | 17,363 | 17,363 | 0 | 101,455,590 |
| 1994 | 713,838 | 68,463,303 | 534,886 | 83,677,702 | 0 | 0 | 17,365 | 17,365 | 0 | 104,227,766 |
| 1995 | 735,201 | 69,349,936 | 537,642 | 84,825,864 | 0 | 0 | 17,366 | 17,366 | 0 | 108,153,914 |
| 1996 | 753,277 | 70,227,179 | 541,582 | 85,945,020 | 0 | 0 | 17,366 | 17,366 | 0 | 118,116,033 |
| 1997 | 812,725 | 71,506,673 | 544,296 | 87,625,911 | 0 | 0 | 17,366 | 17,366 | 0 | 128,382,402 |
| 1998 | 919,184 | 72,258,932 | 548,317 | 89,257,450 | 0 | 0 | 17,366 | 17,366 | 0 | 132,100,751 |
| 1999 | 1,099,996 | 72,892,733 | 552,010 | 90,346,302 | 0 | 0 | 17,366 | 17,366 | 0 | 133,851,324 |
| 2000 | 1,434,303 | 73,407,341 | 555,105 | 92,798,111 | 0 | 0 | 17,367 | 17,367 | 0 | 136,448,345 |
| 2001 | 2,370,493 | 73,717,085 | 556,484 | 94,911,964 | 0 | 0 | 17,368 | 17,368 | 0 | 139,427,882 |
| 2002 | 3,743,050 | 73,891,014 | 557,242 | 97,689,014 | 0 | 0 | 17,369 | 17,369 | 0 | 142,365,817 |
| 2003 | 4,399,237 | 74,203,116 | 559,292 | 99,276,902 | 0 | 0 | 17,370 | 17,370 | 0 | 144,492,399 |
| 2004 | 4,667,151 | 74,439,553 | 559,043 | 100,071,226 | 0 | 0 | 17,370 | 17,370 | 0 | 145,711,592 |
| 2005 | 4,805,748 | 68,331,706 | 559,843 | 100,618,176 | 0 | 0 | 17,370 | 17,370 | 0 | 146,581,448 |
| 2006 | 4,855,541 | 68,667,316 | 562,058 | 101,179,667 | 0 | 0 | 17,370 | 17,370 | 0 | 147,295,299 |
| 2007 | 4,968,240 | 69,385,290 | 567,570 | 102,365,085 | 0 | 0 | 17,370 | 17,370 | 0 | 148,762,214 |
| 2008 | 5,102,692 | 69,990,153 | 571,668 | 103,446,486 | 0 | 0 | 17,370 | 17,370 | 0 | 150,304,426 |
| 2009 | 5,284,102 | 70,622,540 | 575,184 | 104,636,307 | 0 | 0 | 17,371 | 17,371 | 0 | 152,494,692 |
| 2010 | 5,564,964 | 71,851,155 | 583,293 | 107,114,253 | 0 | 0 | 17,371 | 17,371 | 0 | 155,696,966 |
| 2011 | 5,576,636 | 74,719,632 | 590,402 | 111,511,165 | 0 | 0 | 17,392 | 17,392 | 0 | 162,237,600 |
| 2012 | 5,601,076 | 80,280,582 | 600,324 | 120,099,818 | 0 | 0 | 17,413 | 17,413 | 0 | 171,315,837 |
| 2013 | 5,611,024 | 85,048,244 | 610,692 | 127,426,695 | 0 | 0 | 17,434 | 17,434 | 0 | 178,230,666 |
| 2014 | 5,611,973 | 86,809,436 | 613,447 | 129,664,140 | 0 | 0 | 17,456 | 17,456 | 0 | 180,365,616 |
| 2015 | 5,608,316 | 88,170,016 | 621,273 | 131,221,983 | 0 | 0 | 17,074 | 17,074 | 0 | 181,469,586 |
| 2016 | 5,594,190 | 88,483,921 | 620,904 | 131,269,983 | 0 | 0 | 16,938 | 16,938 | 0 | 181,237,253 |
| 2017 | 5,561,481 | 85,939,007 | 594,384 | 127,718,492 | 0 | 0 | 16,964 | 16,964 | 0 | 177,298,776 |
| 2018 | 5,513,232 | 79,620,755 | 529,678 | 119,711,021 | 0 | 0 | 16,986 | 16,986 | 0 | 168,724,234 |
| 2019 | 5,446,288 | 72,501,545 | 460,400 | 110,449,236 | 0 | 0 | 14,361 | 14,361 | 0 | 159,046,182 |
| 2020 | 5,358,366 | 65,842,044 | 405,157 | 101,398,570 | 0 | 0 | 2,435 | 2,435 | 0 | 149,820,669 |
| 2021 | 5,248,385 | 58,194,141 | 346,727 | 90,932,539 | 0 | 0 | 1,609 | 1,609 | 0 | 139,302,895 |
| 2022 | 5,185,375 | 52,320,608 | 309,111 | 82,856,552 | 0 | 0 | 224 | 224 | 0 | 131,201,049 |
| 2023 | 5,163,253 | 50,854,099 | 305,706 | 80,249,520 | 0 | 0 | 223 | 223 | 0 | 128,545,658 |
| 2024 | 5,150,183 | 48,951,190 | 290,940 | 77,962,592 | 0 | 0 | 222 | 222 | 0 | 126,243,410 |
| 2025 | 5,136,724 | 48,100,559 | 286,543 | 76,757,644 | 0 | 0 | 220 | 220 | 0 | 125,010,514 |
| 2026 | 5,123,800 | 47,353,071 | 282,267 | 75,701,647 | 0 | 0 | 219 | 219 | 0 | 123,933,805 |
| 2027 | 5,115,712 | 46,740,290 | 277,959 | 74,865,671 | 0 | 0 | 216 | 216 | 0 | 123,067,644 |
| 2028 | 5,110,798 | 46,176,779 | 272,316 | 74,152,006 | 0 | 0 | 215 | 215 | 0 | 122,309,306 |
| 2029 | 5,107,277 | 45,403,513 | 263,412 | 73,227,905 | 0 | 0 | 213 | 213 | 0 | 121,348,686 |
| 2030 | 5,103,874 | 44,020,396 | 245,930 | 71,650,633 | 0 | 0 | 211 | 211 | 0 | 119,721,783 |
| 2031 | 5,086,674 | 41,109,612 | 213,265 | 68,043,703 | 0 | 0 | 210 | 210 | 0 | 115,995,911 |
| 2032 | 5,088,016 | 40,305,274 | 201,847 | 67,227,596 | 0 | 0 | 208 | 208 | 0 | 115,162,965 |
| 2033 | 5,075,858 | 38,803,638 | 185,752 | 65,282,837 | 0 | 0 | 208 | 208 | 0 | 113,133,087 |
| 2034 | 5,057,641 | 37,627,008 | 176,225 | 63,562,894 | 0 | 0 | 207 | 207 | 0 | 111,212,741 |
| 2035 | 5,044,387 | 36,871,986 | 170,973 | 62,421,018 | 0 | 0 | 206 | 206 | 0 | 109,720,280 |
| TOTAL | 197,996,636 | 4,072,135,068 | 29,847,326 | 5,607,130,336 | 0 | 0 | 872,210 | 872,210 | 0 | 7,833,062,683 |

**TABLE B-16A. Minimum OMP&R Component of
Transportation Charge for Each Contractor**

(in dollars)

Sheet 1 of 4

| Calendar Year | NORTH BAY AREA | | | SOUTH BAY AREA | | | | CENTRAL COASTAL AREA | | |
|------------------|--------------------------|------------------------|-------------|--|--|--|-------------|--|--------------------------------------|-------------|
| | Napa County FC&WCD | Solano County WA | Total | Alameda County FC&WCD, Zone 7 | Alameda County Water District | Santa Clara Valley Water District | Total | San Luis Obispo County FC&WCD | Santa Barbara County FC&WCD | Total |
| | [1] | [2] | [3] | [4] | [5] | [6] | [7] | [8] | [9] | [10] |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1962 | 0 | 0 | 0 | 9,699 | 8,868 | 21,132 | 39,699 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 38,048 | 34,788 | 82,896 | 155,732 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 41,148 | 38,323 | 91,320 | 170,791 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 78,529 | 75,616 | 195,793 | 349,938 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 79,753 | 78,779 | 218,543 | 377,075 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 127,896 | 123,667 | 335,224 | 586,787 | 0 | 0 | 0 |
| 1968 | 130 | 0 | 130 | 126,058 | 120,563 | 333,506 | 580,127 | 11,800 | 21,770 | 33,570 |
| 1969 | 80,875 | 0 | 80,875 | 145,411 | 138,050 | 372,585 | 656,046 | 63,113 | 116,435 | 179,548 |
| 1970 | 94,872 | 0 | 94,872 | 128,993 | 120,245 | 320,664 | 569,902 | 74,187 | 136,867 | 211,054 |
| 1971 | 45,579 | 0 | 45,579 | 113,071 | 108,346 | 296,004 | 517,421 | 74,011 | 136,541 | 210,552 |
| 1972 | 37,895 | 0 | 37,895 | 122,407 | 117,483 | 334,366 | 574,256 | 79,196 | 146,107 | 225,303 |
| 1973 | 32,993 | 0 | 32,993 | 122,738 | 116,785 | 325,726 | 565,249 | 75,714 | 139,683 | 215,397 |
| 1974 | 46,498 | 0 | 46,498 | 154,435 | 146,929 | 403,080 | 704,444 | 76,530 | 141,189 | 217,719 |
| 1975 | 37,707 | 0 | 37,707 | 189,175 | 182,087 | 513,823 | 885,085 | 92,605 | 170,845 | 263,450 |
| 1976 | 60,786 | 0 | 60,786 | 203,064 | 193,435 | 524,813 | 921,312 | 94,935 | 175,144 | 270,079 |
| 1977 | 78,400 | 0 | 78,400 | 179,869 | 169,065 | 500,101 | 849,035 | 102,945 | 189,922 | 292,867 |
| 1978 | 56,318 | 0 | 56,318 | 239,301 | 228,855 | 647,828 | 1,115,984 | 104,060 | 191,978 | 296,038 |
| 1979 | 73,852 | 0 | 73,852 | 236,986 | 232,105 | 666,742 | 1,135,833 | 100,748 | 185,868 | 286,616 |
| 1980 | 81,769 | 0 | 81,769 | 389,575 | 372,185 | 1,010,830 | 1,772,590 | 126,328 | 233,105 | 359,433 |
| 1981 | 101,340 | 0 | 101,340 | 317,408 | 302,272 | 834,257 | 1,453,937 | 140,208 | 258,712 | 398,920 |
| 1982 | 191,987 | 0 | 191,987 | 386,742 | 369,633 | 1,098,844 | 1,855,219 | 142,045 | 262,101 | 404,146 |
| 1983 | 80,215 | 0 | 80,215 | 438,536 | 428,973 | 1,269,373 | 2,136,882 | 171,001 | 315,523 | 486,524 |
| 1984 | 106,485 | 0 | 106,485 | 591,243 | 565,721 | 1,817,629 | 2,974,593 | 201,768 | 372,284 | 574,052 |
| 1985 | 215,341 | 0 | 215,341 | 674,975 | 655,490 | 1,840,211 | 3,170,676 | 242,935 | 448,233 | 691,168 |
| 1986 | 203,704 | 0 | 203,704 | 613,273 | 583,077 | 1,784,056 | 2,980,406 | 233,000 | 429,904 | 662,904 |
| 1987 | 295,505 | 0 | 295,505 | 687,629 | 652,468 | 2,000,817 | 3,340,914 | 230,484 | 463,838 | 694,322 |
| 1988 | 312,677 | (58) | 312,619 | 676,847 | 655,274 | 1,910,092 | 3,242,213 | 258,807 | 561,030 | 819,837 |
| 1989 | 403,330 | 688,185 | 1,091,515 | 716,831 | 712,354 | 1,897,149 | 3,326,334 | 244,772 | 668,476 | 913,248 |
| 1990 | 658,942 | 674,944 | 1,333,886 | 782,589 | 780,305 | 2,129,966 | 3,692,860 | 310,222 | 677,025 | 987,247 |
| 1991 | 726,717 | 860,903 | 1,587,620 | 543,178 | 524,741 | 1,520,569 | 2,588,488 | 302,369 | 673,858 | 976,227 |
| 1992 | 483,580 | 712,313 | 1,195,893 | 796,058 | 855,050 | 2,253,496 | 3,904,604 | 346,220 | 736,477 | 1,082,697 |
| 1993 | 524,000 | 708,129 | 1,232,129 | 1,280,736 | 1,261,431 | 3,338,742 | 5,880,909 | 386,060 | 734,138 | 1,120,198 |
| 1994 | 573,814 | 658,274 | 1,232,088 | 1,368,665 | 1,312,746 | 3,560,310 | 6,241,721 | 481,022 | 888,287 | 1,369,309 |
| 1995 | 539,407 | 660,770 | 1,200,177 | 1,232,272 | 1,187,201 | 3,216,470 | 5,635,943 | 477,929 | 881,323 | 1,359,252 |
| 1996 | 604,992 | 1,011,298 | 1,616,290 | 1,185,220 | 1,124,968 | 3,007,330 | 5,317,518 | 649,161 | 1,197,179 | 1,846,340 |
| 1997 | 563,579 | 741,881 | 1,305,460 | 1,029,670 | 968,999 | 2,667,649 | 4,666,318 | 406,652 | 749,805 | 1,156,457 |
| 1998 | 461,844 | 1,123,037 | 1,584,881 | 1,064,729 | 1,174,897 | 3,502,733 | 5,742,359 | 810,087 | 3,051,492 | 3,861,579 |
| 1999 | 606,922 | 996,477 | 1,603,399 | 1,226,109 | 1,267,481 | 5,087,065 | 7,580,655 | 788,862 | 3,088,558 | 3,877,420 |
| 2000 | 776,769 | 1,494,338 | 2,271,107 | 2,179,743 | 2,198,291 | 3,761,831 | 7,239,865 | 715,996 | 3,160,762 | 3,876,758 |
| 2001 | 651,274 | 1,443,682 | 2,094,956 | 4,195,016 | 1,038,374 | 3,545,269 | 8,778,659 | 734,101 | 2,958,670 | 3,692,771 |
| 2002 | 1,099,148 | 1,874,572 | 2,973,720 | 8,267,821 | 1,361,289 | 6,069,488 | 15,698,598 | 772,247 | 3,352,872 | 4,125,119 |
| 2003 | 1,176,050 | 2,260,754 | 3,436,804 | 4,933,808 | 1,072,683 | 3,589,219 | 9,595,710 | 828,305 | 3,300,080 | 4,358,385 |
| 2004 | 1,627,249 | 2,362,063 | 3,989,312 | 2,614,117 | 1,295,454 | 3,578,168 | 7,487,739 | 830,574 | 3,464,470 | 4,295,044 |
| 2005 | 920,562 | 1,804,032 | 2,724,594 | 2,405,614 | 1,136,804 | 2,966,324 | 6,508,742 | 879,975 | 3,770,131 | 4,650,106 |
| 2006 | 828,497 | 1,408,670 | 2,237,167 | 2,402,834 | 1,151,721 | 3,161,180 | 6,715,735 | 829,044 | 4,056,728 | 4,885,772 |
| 2007 | 1,048,698 | 2,219,969 | 3,268,667 | 3,129,675 | 1,498,983 | 3,870,608 | 8,499,266 | 1,042,216 | 5,014,950 | 6,057,166 |
| 2008 | 1,107,604 | 1,524,405 | 2,632,009 | 3,303,400 | 1,562,109 | 4,039,387 | 8,904,536 | 1,458,905 | 6,634,505 | 8,093,410 |
| 2009 | 1,268,269 | 1,611,812 | 2,880,081 | 2,937,217 | 1,333,493 | 3,773,045 | 8,043,755 | 1,373,802 | 6,456,545 | 7,830,347 |
| 2010 | 1,259,897 | 2,197,788 | 3,457,685 | 2,974,362 | 1,437,123 | 3,729,395 | 8,140,880 | 1,395,835 | 6,285,243 | 7,681,078 |
| 2011 | 1,375,095 | 2,385,496 | 3,760,591 | 3,580,783 | 1,701,857 | 4,402,591 | 9,685,231 | 1,448,659 | 7,230,074 | 8,678,733 |
| 2012 | 1,321,503 | 2,290,701 | 3,612,204 | 3,396,895 | 1,589,582 | 4,146,182 | 9,132,659 | 1,334,274 | 6,517,919 | 7,852,193 |
| 2013 | 1,295,811 | 2,254,785 | 3,550,596 | 3,249,946 | 1,539,554 | 4,012,175 | 8,801,675 | 1,348,508 | 6,435,848 | 7,784,356 |
| 2014 | 1,308,770 | 2,277,333 | 3,586,103 | 3,282,445 | 1,554,949 | 4,052,297 | 8,889,691 | 1,361,993 | 6,500,206 | 7,862,199 |
| 2015 | 1,321,856 | 2,300,105 | 3,621,961 | 3,315,259 | 1,570,499 | 4,092,819 | 8,978,577 | 1,375,613 | 6,565,208 | 7,940,821 |
| 2016 | 1,335,075 | 2,323,107 | 3,658,182 | 3,348,411 | 1,586,204 | 4,133,747 | 9,068,362 | 1,389,369 | 6,630,860 | 8,020,229 |
| 2017 | 1,348,426 | 2,346,337 | 3,694,763 | 3,381,895 | 1,602,065 | 4,175,084 | 9,159,044 | 1,403,263 | 6,697,169 | 8,100,432 |
| 2018 | 1,361,910 | 2,369,801 | 3,731,711 | 3,415,714 | 1,618,086 | 4,216,835 | 9,250,635 | 1,417,295 | 6,764,141 | 8,181,436 |
| 2019 | 1,375,529 | 2,393,499 | 3,769,028 | 3,449,871 | 1,634,267 | 4,259,003 | 9,343,141 | 1,431,468 | 6,831,783 | 8,263,251 |
| 2020 | 1,389,283 | 2,417,430 | 3,806,713 | 3,484,355 | 1,650,610 | 4,301,594 | 9,436,559 | 1,445,783 | 6,900,100 | 8,345,883 |
| 2021 | 1,403,175 | 2,441,605 | 3,844,780 | 3,519,198 | 1,667,116 | 4,344,609 | 9,530,923 | 1,460,241 | 6,969,101 | 8,429,342 |
| 2022 | 1,417,207 | 2,466,020 | 3,883,227 | 3,554,390 | 1,683,787 | 4,388,056 | 9,626,233 | 1,474,843 | 7,038,792 | 8,513,635 |
| 2023 | 1,431,380 | 2,490,681 | 3,922,061 | 3,589,934 | 1,700,625 | 4,431,937 | 9,722,496 | 1,489,592 | 7,109,180 | 8,598,772 |
| 2024 | 1,445,693 | 2,515,587 | 3,961,280 | 3,625,833 | 1,717,631 | 4,476,255 | 9,819,719 | 1,504,487 | 7,180,271 | 8,684,758 |
| 2025 | 1,460,150 | 2,540,743 | 4,000,893 | 3,662,092 | 1,734,807 | 4,521,018 | 9,917,917 | 1,519,532 | 7,252,075 | 8,771,607 |
| 2026 | 1,474,751 | 2,566,151 | 4,040,902 | 3,698,713 | 1,752,155 | 4,566,229 | 10,017,097 | 1,534,728 | 7,324,595 | 8,859,323 |
| 2027 | 1,489,500 | 2,591,813 | 4,081,313 | 3,735,700 | 1,769,677 | 4,611,891 | 10,117,268 | 1,550,075 | 7,397,841 | 8,947,916 |
| 2028 | 1,504,394 | 2,617,731 | 4,122,125 | 3,773,057 | 1,787,374 | 4,658,010 | 10,218,441 | 1,565,576 | 7,471,819 | 9,037,395 |
| 2029 | 1,519,437 | 2,643,908 | 4,163,345 | 3,810,788 | 1,805,248 | 4,704,590 | 10,320,626 | 1,581,231 | 7,546,538 | 9,127,769 |
| 2030 | 1,534,632 | 2,670,347 | 4,204,979 | 3,848,895 | 1,823,300 | 4,751,634 | 10,423,829 | 1,597,044 | 7,622,004 | 9,219,048 |
| 2031 | 1,549,978 | 2,697,050 | 4,247,028 | 3,887,384 | 1,841,533 | 4,799,152 | 10,528,069 | 1,613,014 | 7,698,223 | 9,311,237 |
| 2032 | 1,565,478 | 2,724,021 | 4,289,499 | 3,926,258 | 1,859,948 | 4,847,144 | 10,633,350 | 1,629,144 | 7,775,205 | 9,404,349 |
| 2033 | 1,581,133 | 2,751,261 | 4,332,394 | 3,965,521 | 1,878,548 | 4,895,615 | 10,739,684 | 1,645,436 | 7,852,957 | 9,498,393 |
| 2034 | 1,596,944 | 2,778,774 | 4,375,718 | 4,005,176 | 1,897,333 | 4,944,572 | 10,847,081 | 1,661,890 | 7,931,487 | 9,593,377 |
| 2035 | 1,612,914 | 2,806,561 | 4,419,475 | 4,045,228 | 1,916,307 | 4,994,018 | 10,955,553 | 1,678,509 | 8,010,802 | 9,689,311 |
| TOTAL | 56,166,096 | 91,237,241 | 147,403,337 | 148,235,854 | 75,058,641 | 205,742,705 | 429,037,200 | 56,222,343 | 246,382,851 | 302,605,194 |

**TABLE B-16A. Minimum OMP&R Component of
Transportation Charge for Each Contractor**

(in dollars)

Sheet 2 of 4

| Calendar Year | SAN JOAQUIN VALLEY AREA | | | | | | | | | |
|------------------|--------------------------------------|---|---|--------------------------------|--------------|-----------------------|-------------------------------|---|-------------|--|
| | Dudley Ridge Water District | Empire West Side Irrigation District | Future Contractor San Joaquin Valley | Kern County Water Agency | | County of Kings | Oak Flat Water District | Tulare Lake Basin Water Storage District | Total | |
| | | | | Municipal and Industrial | Agricultural | | | | | |
| | [11] | [12] | [13] | [14] | [15] | [16] | [17] | [18] | [19] | |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 1968 | 37,806 | 1,963 | 5,639 | 60,701 | 678,086 | 2,008 | 2,073 | 77,591 | 865,867 | |
| 1969 | 45,479 | 2,235 | 30,158 | 80,554 | 1,197,126 | 2,286 | 2,085 | 90,773 | 1,450,696 | |
| 1970 | 46,969 | 2,292 | 35,450 | 96,673 | 1,381,493 | 2,344 | 2,158 | 93,408 | 1,660,787 | |
| 1971 | 47,997 | 2,314 | 35,366 | 106,654 | 1,643,163 | 2,366 | 2,288 | 94,874 | 1,935,022 | |
| 1972 | 49,866 | 2,414 | 37,844 | 122,313 | 1,729,169 | 2,469 | 2,254 | 98,777 | 2,045,106 | |
| 1973 | 50,006 | 2,385 | 36,180 | 125,553 | 1,719,873 | 2,440 | 2,310 | 98,330 | 2,037,077 | |
| 1974 | 52,818 | 2,556 | 36,570 | 135,661 | 1,823,065 | 2,614 | 2,529 | 104,609 | 2,160,422 | |
| 1975 | 66,963 | 3,243 | 44,251 | 162,738 | 2,235,242 | 3,317 | 3,191 | 132,663 | 2,651,608 | |
| 1976 | 66,504 | 3,328 | 45,364 | 159,303 | 2,215,999 | 3,404 | 2,919 | 133,940 | 2,630,761 | |
| 1977 | 75,595 | 3,812 | 49,192 | 189,661 | 2,522,290 | 3,898 | 3,708 | 152,838 | 3,000,994 | |
| 1978 | 70,688 | 3,503 | 49,725 | 174,897 | 2,427,163 | 3,583 | 3,644 | 141,672 | 2,874,875 | |
| 1979 | 68,879 | 3,436 | 48,142 | 173,677 | 2,378,315 | 3,514 | 3,492 | 138,493 | 2,817,948 | |
| 1980 | 95,898 | 4,722 | 59,551 | 235,741 | 3,146,570 | 4,830 | 4,777 | 191,582 | 3,743,671 | |
| 1981 | 118,448 | 5,965 | 66,183 | 266,353 | 3,440,557 | 6,099 | 5,187 | 239,323 | 4,148,115 | |
| 1982 | 134,083 | 6,711 | 67,061 | 311,879 | 3,848,922 | 6,862 | 6,382 | 270,061 | 4,651,961 | |
| 1983 | 184,902 | 9,242 | 80,869 | 426,485 | 5,030,031 | 9,450 | 8,494 | 372,182 | 6,121,655 | |
| 1984 | 194,228 | 9,656 | 95,555 | 471,854 | 5,636,134 | 9,874 | 8,719 | 389,892 | 6,815,912 | |
| 1985 | 200,694 | 9,957 | 115,227 | 486,162 | 6,042,593 | 10,182 | 8,982 | 402,457 | 7,276,254 | |
| 1986 | 207,028 | 10,302 | 110,479 | 530,803 | 6,372,710 | 10,536 | 10,341 | 415,776 | 7,667,975 | |
| 1987 | 205,002 | 10,259 | 109,401 | 533,451 | 6,378,437 | 10,493 | 10,517 | 412,889 | 7,670,449 | |
| 1988 | 203,711 | 10,223 | 122,903 | 516,432 | 6,388,497 | 10,455 | 10,341 | 410,868 | 7,673,430 | |
| 1989 | 224,049 | 11,269 | 116,197 | 564,169 | 6,747,046 | 11,526 | 11,102 | 452,406 | 8,137,764 | |
| 1990 | 271,051 | 13,666 | 148,238 | 664,040 | 8,111,616 | 13,976 | 13,206 | 547,974 | 9,783,767 | |
| 1991 | 275,748 | 13,854 | 144,486 | 662,755 | 8,111,610 | 14,168 | 13,218 | 556,474 | 9,792,313 | |
| 1992 | 317,889 | 16,027 | 162,466 | 764,224 | 9,115,453 | 16,393 | 18,209 | 642,672 | 11,053,333 | |
| 1993 | 359,879 | 17,989 | 184,477 | 831,662 | 10,372,245 | 18,399 | 19,560 | 724,397 | 12,528,608 | |
| 1994 | 309,084 | 15,486 | 224,254 | 738,619 | 9,789,833 | 15,839 | 16,434 | 622,879 | 11,732,428 | |
| 1995 | 395,441 | 19,918 | 220,899 | 898,339 | 11,190,121 | 20,373 | 21,551 | 799,070 | 13,565,712 | |
| 1996 | 362,623 | 19,968 | 301,835 | 902,162 | 11,872,821 | 20,424 | 21,664 | 796,711 | 14,298,208 | |
| 1997 | 366,476 | 20,154 | 186,450 | 942,987 | 10,558,144 | 20,613 | 19,344 | 806,084 | 12,920,252 | |
| 1998 | 453,033 | 24,560 | 288,906 | 1,098,213 | 12,207,920 | 25,122 | 21,594 | 995,194 | 15,114,542 | |
| 1999 | 377,276 | 20,789 | 272,338 | 964,734 | 10,925,455 | 21,262 | 21,609 | 829,164 | 13,432,627 | |
| 2000 | 384,764 | 21,158 | 207,553 | 1,023,275 | 9,964,503 | 21,639 | 22,747 | 844,634 | 12,490,273 | |
| 2001 | 463,471 | 25,498 | 231,881 | 1,210,981 | 11,264,666 | 26,077 | 31,736 | 1,017,786 | 14,272,096 | |
| 2002 | 427,775 | 21,650 | 224,911 | 1,084,002 | 10,269,846 | 22,143 | 25,651 | 816,626 | 12,892,604 | |
| 2003 | 500,729 | 25,503 | 244,918 | 1,191,328 | 11,412,714 | 26,087 | 30,972 | 956,015 | 14,388,266 | |
| 2004 | 448,989 | 22,984 | 247,721 | 1,139,861 | 10,806,524 | 62,633 | 25,741 | 743,025 | 13,497,478 | |
| 2005 | 426,739 | 21,895 | 258,220 | 1,013,505 | 10,325,502 | 59,577 | 24,355 | 707,159 | 12,836,952 | |
| 2006 | 469,636 | 24,018 | 204,504 | 1,121,864 | 10,510,493 | 72,718 | 26,772 | 774,140 | 13,204,145 | |
| 2007 | 516,531 | 26,008 | 253,293 | 1,265,508 | 11,778,966 | 81,454 | 25,705 | 843,152 | 14,790,617 | |
| 2008 | 645,116 | 33,221 | 378,714 | 1,522,258 | 15,486,195 | 104,444 | 33,382 | 1,068,120 | 19,271,450 | |
| 2009 | 529,143 | 27,091 | 352,743 | 1,265,729 | 13,167,486 | 86,704 | 28,652 | 872,844 | 16,330,392 | |
| 2010 | 576,386 | 33,728 | 385,277 | 1,509,478 | 14,826,187 | 106,033 | 30,505 | 1,006,281 | 18,473,875 | |
| 2011 | 661,373 | 35,835 | 371,606 | 1,626,348 | 16,056,442 | 112,137 | 38,003 | 1,068,898 | 19,970,642 | |
| 2012 | 638,817 | 34,275 | 362,831 | 1,461,341 | 15,780,119 | 106,221 | 30,475 | 1,022,985 | 19,437,064 | |
| 2013 | 619,967 | 33,264 | 376,971 | 1,419,937 | 15,459,783 | 103,955 | 30,104 | 992,820 | 19,036,801 | |
| 2014 | 626,167 | 33,597 | 380,740 | 1,434,136 | 15,614,381 | 104,995 | 30,405 | 1,002,748 | 19,227,169 | |
| 2015 | 597,745 | 33,934 | 384,548 | 1,448,124 | 15,767,797 | 106,045 | 30,709 | 1,012,775 | 19,381,677 | |
| 2016 | 603,722 | 34,273 | 388,393 | 1,462,605 | 15,925,475 | 107,105 | 31,016 | 1,022,903 | 19,575,492 | |
| 2017 | 609,759 | 34,616 | 392,277 | 1,477,231 | 16,084,730 | 108,176 | 31,327 | 1,033,132 | 19,771,248 | |
| 2018 | 615,857 | 34,962 | 396,200 | 1,492,003 | 16,245,577 | 109,258 | 31,640 | 1,043,464 | 19,968,961 | |
| 2019 | 622,015 | 35,312 | 400,162 | 1,506,923 | 16,408,032 | 110,351 | 31,956 | 1,053,898 | 20,168,649 | |
| 2020 | 579,631 | 35,664 | 404,163 | 1,521,499 | 16,568,295 | 111,455 | 32,276 | 1,064,437 | 20,317,420 | |
| 2021 | 585,427 | 36,021 | 408,205 | 1,536,714 | 16,733,978 | 112,569 | 32,599 | 1,075,082 | 20,520,595 | |
| 2022 | 591,281 | 36,381 | 412,287 | 1,552,081 | 16,901,318 | 113,695 | 32,925 | 1,085,832 | 20,725,800 | |
| 2023 | 597,194 | 36,745 | 416,410 | 1,567,602 | 17,070,331 | 114,832 | 33,254 | 1,096,691 | 20,933,059 | |
| 2024 | 603,166 | 37,112 | 420,574 | 1,583,278 | 17,241,035 | 115,980 | 33,586 | 1,107,658 | 21,142,389 | |
| 2025 | 609,198 | 37,483 | 424,780 | 1,599,111 | 17,413,444 | 117,140 | 33,922 | 1,118,734 | 21,353,812 | |
| 2026 | 615,290 | 37,858 | 429,027 | 1,615,102 | 17,587,579 | 118,311 | 34,261 | 1,129,922 | 21,567,350 | |
| 2027 | 621,443 | 38,237 | 433,318 | 1,631,253 | 17,763,455 | 119,494 | 34,604 | 1,141,221 | 21,783,025 | |
| 2028 | 627,657 | 38,619 | 437,651 | 1,647,565 | 17,941,090 | 120,689 | 34,950 | 1,152,633 | 22,000,854 | |
| 2029 | 633,934 | 39,005 | 442,027 | 1,664,041 | 18,120,500 | 121,896 | 35,300 | 1,164,159 | 22,220,862 | |
| 2030 | 640,273 | 39,395 | 446,448 | 1,680,682 | 18,301,706 | 123,115 | 35,653 | 1,175,801 | 22,443,073 | |
| 2031 | 646,676 | 39,789 | 450,912 | 1,697,488 | 18,484,723 | 124,346 | 36,009 | 1,187,559 | 22,667,502 | |
| 2032 | 653,142 | 40,187 | 455,421 | 1,714,463 | 18,669,570 | 125,590 | 36,369 | 1,199,434 | 22,894,176 | |
| 2033 | 659,674 | 40,589 | 459,975 | 1,731,608 | 18,856,265 | 126,846 | 36,733 | 1,211,429 | 23,123,119 | |
| 2034 | 666,271 | 40,995 | 464,575 | 1,748,924 | 19,044,828 | 128,114 | 37,100 | 1,223,543 | 23,354,350 | |
| 2035 | 672,933 | 41,405 | 469,221 | 1,766,413 | 19,235,277 | 129,395 | 37,471 | 1,235,779 | 23,587,894 | |
| TOTAL | 26,924,004 | 1,512,505 | 16,950,113 | 67,333,710 | 736,326,511 | 3,872,338 | 1,452,747 | 49,509,342 | 903,881,270 | |

**TABLE B-16A. Minimum OMP&R Component of
Transportation Charge for Each Contractor**

(in dollars)

Sheet 3 of 4

| Calendar Year | SOUTHERN CALIFORNIA AREA | | | | | | | | | |
|------------------|--|------------------------------------|--|---|---------------------------|---|---------------------------|-------------------------------|---|--|
| | Antelope Valley- East Kern Water Agency | Castaic Lake Water Agency | Coachella Valley Water District | Crestline- Lake Arrowhead Water Agency | Desert Water Agency | Littlerock Creek Irrigation District | Mojave Water Agency | Palmdale Water District | San Bernardino Valley Municipal Water District | San Gabriel Valley Municipal Water District |
| | [20] | [21] | [22] | [23] | [24] | [25] | [26] | [27] | [28] | [29] |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1968 | 65,074 | 28,085 | 11,697 | 2,958 | 19,291 | 1,089 | 24,380 | 8,173 | 52,315 | 14,399 |
| 1969 | 86,339 | 70,342 | 15,522 | 3,925 | 25,598 | 1,445 | 32,348 | 10,844 | 69,419 | 19,106 |
| 1970 | 107,807 | 84,577 | 19,392 | 4,904 | 31,981 | 1,804 | 40,391 | 13,540 | 86,727 | 23,865 |
| 1971 | 178,820 | 105,979 | 32,228 | 8,150 | 53,151 | 2,992 | 66,999 | 22,459 | 144,136 | 39,636 |
| 1972 | 363,555 | 202,625 | 106,740 | 30,967 | 176,037 | 6,601 | 213,032 | 48,102 | 548,123 | 144,113 |
| 1973 | 404,661 | 222,765 | 121,341 | 34,674 | 200,116 | 7,346 | 243,320 | 53,975 | 724,535 | 190,156 |
| 1974 | 434,868 | 235,528 | 130,627 | 37,062 | 215,432 | 7,677 | 262,735 | 56,383 | 786,107 | 207,019 |
| 1975 | 504,791 | 289,501 | 151,031 | 43,176 | 249,082 | 9,082 | 303,108 | 65,580 | 905,424 | 238,842 |
| 1976 | 559,013 | 262,420 | 160,686 | 44,454 | 265,004 | 10,030 | 325,512 | 73,253 | 964,524 | 256,570 |
| 1977 | 675,504 | 335,749 | 184,813 | 47,743 | 304,792 | 11,890 | 381,161 | 87,355 | 1,069,446 | 289,793 |
| 1978 | 600,343 | 376,946 | 187,028 | 54,156 | 308,449 | 10,711 | 373,192 | 78,304 | 1,148,279 | 300,751 |
| 1979 | 661,123 | 349,072 | 196,264 | 52,211 | 323,677 | 12,124 | 401,469 | 87,126 | 1,125,452 | 302,508 |
| 1980 | 858,039 | 415,571 | 253,090 | 71,921 | 417,398 | 15,435 | 508,379 | 112,853 | 1,518,405 | 401,223 |
| 1981 | 1,001,503 | 511,087 | 284,970 | 73,534 | 469,970 | 18,046 | 588,024 | 131,992 | 1,548,350 | 420,523 |
| 1982 | 1,128,643 | 557,494 | 320,938 | 89,560 | 529,292 | 20,193 | 649,204 | 148,012 | 1,870,559 | 497,871 |
| 1983 | 1,744,932 | 832,687 | 450,049 | 119,275 | 742,218 | 30,643 | 922,072 | 225,793 | 2,373,149 | 639,682 |
| 1984 | 2,105,780 | 943,524 | 548,784 | 150,179 | 905,055 | 36,810 | 1,112,196 | 271,187 | 3,018,294 | 803,394 |
| 1985 | 2,157,936 | 1,055,744 | 584,697 | 157,841 | 964,282 | 38,972 | 1,191,309 | 277,250 | 3,230,403 | 860,780 |
| 1986 | 2,311,841 | 1,102,466 | 618,750 | 162,748 | 1,020,438 | 40,051 | 1,268,806 | 295,987 | 3,318,638 | 893,069 |
| 1987 | 2,366,343 | 1,032,918 | 628,222 | 167,262 | 1,036,061 | 41,773 | 1,283,836 | 307,844 | 3,400,838 | 913,933 |
| 1988 | 2,303,274 | 1,042,113 | 649,276 | 175,694 | 1,070,784 | 40,604 | 1,321,553 | 298,438 | 3,587,873 | 960,968 |
| 1989 | 2,280,051 | 1,088,176 | 613,266 | 169,993 | 1,011,401 | 39,501 | 1,240,888 | 292,775 | 3,499,964 | 932,519 |
| 1990 | 2,636,186 | 1,275,150 | 708,829 | 201,242 | 1,169,006 | 45,472 | 1,424,445 | 336,069 | 4,084,211 | 1,078,392 |
| 1991 | 2,737,441 | 1,454,172 | 763,989 | 210,644 | 1,259,974 | 48,936 | 1,546,583 | 358,165 | 4,348,900 | 1,150,633 |
| 1992 | 2,781,586 | 1,579,025 | 750,248 | 198,232 | 1,237,307 | 49,829 | 1,538,733 | 362,844 | 4,131,745 | 1,115,632 |
| 1993 | 3,109,819 | 1,689,775 | 850,589 | 234,719 | 1,402,796 | 56,125 | 1,722,415 | 411,539 | 5,023,595 | 1,338,111 |
| 1994 | 2,825,193 | 1,608,731 | 794,991 | 225,121 | 1,311,100 | 51,259 | 1,634,886 | 376,180 | 4,794,820 | 1,267,565 |
| 1995 | 3,121,440 | 1,720,649 | 848,101 | 231,718 | 1,398,686 | 58,749 | 1,766,297 | 444,998 | 4,828,432 | 1,272,345 |
| 1996 | 3,093,678 | 1,966,634 | 862,720 | 228,008 | 1,422,789 | 56,813 | 1,817,427 | 423,444 | 4,707,473 | 1,256,549 |
| 1997 | 3,250,394 | 1,810,292 | 918,428 | 281,067 | 1,514,687 | 59,547 | 1,853,224 | 446,127 | 5,705,741 | 1,477,757 |
| 1998 | 3,876,512 | 2,050,254 | 1,070,517 | 299,639 | 1,765,491 | 73,835 | 3,207,848 | 561,246 | 6,076,375 | 1,634,942 |
| 1999 | 3,784,708 | 2,081,926 | 1,101,249 | 307,508 | 1,816,174 | 75,055 | 3,188,568 | 543,650 | 6,380,229 | 1,718,443 |
| 2000 | 3,759,366 | 3,387,545 | 1,037,860 | 292,328 | 1,711,639 | 68,562 | 3,006,271 | 595,795 | 5,888,101 | 1,575,188 |
| 2001 | 4,464,792 | 3,774,644 | 1,112,209 | 298,239 | 1,834,241 | 80,960 | 3,289,247 | 700,771 | 5,759,408 | 1,556,616 |
| 2002 | 3,655,376 | 3,510,561 | 1,021,928 | 283,580 | 1,685,364 | 62,831 | 3,012,043 | 551,803 | 5,654,453 | 1,517,197 |
| 2003 | 4,120,023 | 3,445,464 | 1,138,945 | 302,901 | 1,878,173 | 68,966 | 3,337,390 | 616,361 | 6,699,516 | 1,629,937 |
| 2004 | 4,508,006 | 4,095,714 | 1,464,296 | 328,309 | 1,939,746 | 77,893 | 3,477,291 | 686,162 | 7,342,821 | 1,796,410 |
| 2005 | 3,850,752 | 3,566,592 | 5,937,940 | 291,053 | 2,261,323 | 67,134 | 2,925,167 | 584,130 | 6,842,975 | 1,609,772 |
| 2006 | 4,122,181 | 3,379,090 | 8,500,399 | 312,224 | 2,842,599 | 75,474 | 3,200,286 | 647,047 | 7,029,537 | 1,712,207 |
| 2007 | 4,262,519 | 4,583,506 | 8,447,755 | 329,974 | 2,855,335 | 76,453 | 3,339,433 | 657,154 | 8,453,091 | 1,859,446 |
| 2008 | 4,903,429 | 5,446,027 | 9,712,346 | 471,164 | 3,329,028 | 84,278 | 4,137,099 | 862,460 | 9,155,276 | 2,074,988 |
| 2009 | 4,464,743 | 4,574,745 | 8,626,628 | 420,621 | 3,016,734 | 77,394 | 3,757,466 | 753,988 | 8,918,982 | 2,029,684 |
| 2010 | 4,829,032 | 4,879,089 | 10,454,188 | 551,813 | 3,709,811 | 82,659 | 4,359,393 | 843,739 | 10,815,873 | 2,422,426 |
| 2011 | 5,288,293 | 5,124,275 | 10,995,416 | 518,520 | 3,835,604 | 91,331 | 4,592,680 | 917,862 | 10,507,928 | 2,386,412 |
| 2012 | 5,154,364 | 4,911,432 | 11,381,439 | 438,998 | 4,000,466 | 92,400 | 4,660,748 | 770,385 | 10,746,384 | 2,467,153 |
| 2013 | 5,047,056 | 4,897,499 | 10,974,969 | 436,599 | 3,855,622 | 88,385 | 4,519,146 | 758,758 | 10,642,480 | 2,429,356 |
| 2014 | 5,097,527 | 4,946,474 | 11,084,718 | 440,965 | 3,894,178 | 89,269 | 4,564,337 | 766,345 | 10,748,904 | 2,453,650 |
| 2015 | 5,145,359 | 4,993,739 | 11,192,331 | 445,235 | 3,931,800 | 90,114 | 4,707,131 | 773,533 | 10,853,918 | 2,477,505 |
| 2016 | 5,196,812 | 5,043,676 | 11,304,254 | 449,687 | 3,971,118 | 91,015 | 4,754,202 | 781,268 | 10,962,456 | 2,502,280 |
| 2017 | 5,248,781 | 5,094,113 | 11,417,297 | 454,184 | 4,010,829 | 91,925 | 4,801,744 | 789,081 | 11,072,081 | 2,527,303 |
| 2018 | 5,301,268 | 5,145,054 | 11,531,470 | 458,726 | 4,050,937 | 92,844 | 4,849,761 | 796,971 | 11,182,801 | 2,552,576 |
| 2019 | 5,354,281 | 5,196,504 | 11,646,784 | 463,313 | 4,091,446 | 93,773 | 4,898,259 | 804,941 | 11,294,629 | 2,578,102 |
| 2020 | 5,403,433 | 5,245,397 | 11,758,725 | 467,749 | 4,130,515 | 94,637 | 5,083,184 | 812,326 | 11,404,115 | 2,602,931 |
| 2021 | 5,457,467 | 5,297,851 | 11,876,313 | 472,427 | 4,171,820 | 95,583 | 5,134,016 | 820,449 | 11,518,156 | 2,628,960 |
| 2022 | 5,512,041 | 5,350,830 | 11,995,076 | 477,151 | 4,213,538 | 96,539 | 5,185,356 | 828,653 | 11,633,338 | 2,655,250 |
| 2023 | 5,567,162 | 5,404,338 | 12,115,026 | 481,923 | 4,255,673 | 97,505 | 5,237,210 | 836,940 | 11,749,671 | 2,681,803 |
| 2024 | 5,622,834 | 5,458,381 | 12,236,176 | 486,742 | 4,298,230 | 98,480 | 5,289,582 | 845,309 | 11,867,167 | 2,708,621 |
| 2025 | 5,679,062 | 5,512,965 | 12,358,538 | 491,609 | 4,341,212 | 99,464 | 5,342,477 | 853,762 | 11,985,839 | 2,735,707 |
| 2026 | 5,735,853 | 5,568,095 | 12,482,124 | 496,525 | 4,384,625 | 100,459 | 5,395,902 | 862,300 | 12,105,698 | 2,763,064 |
| 2027 | 5,793,211 | 5,623,776 | 12,606,945 | 501,491 | 4,428,471 | 101,464 | 5,449,861 | 870,923 | 12,226,756 | 2,790,694 |
| 2028 | 5,851,143 | 5,680,014 | 12,733,014 | 506,506 | 4,472,756 | 102,478 | 5,504,360 | 879,632 | 12,349,022 | 2,818,601 |
| 2029 | 5,909,655 | 5,736,814 | 12,860,345 | 511,571 | 4,517,483 | 103,503 | 5,559,404 | 888,429 | 12,472,513 | 2,846,788 |
| 2030 | 5,968,751 | 5,794,182 | 12,988,948 | 516,686 | 4,562,658 | 104,538 | 5,614,998 | 897,313 | 12,597,238 | 2,875,255 |
| 2031 | 6,028,439 | 5,852,124 | 13,118,837 | 521,853 | 4,608,285 | 105,584 | 5,671,148 | 906,286 | 12,723,210 | 2,904,008 |
| 2032 | 6,088,723 | 5,910,645 | 13,250,026 | 527,072 | 4,654,367 | 106,639 | 5,727,859 | 915,349 | 12,850,442 | 2,933,048 |
| 2033 | 6,149,610 | 5,969,751 | 13,382,526 | 532,343 | 4,700,911 | 107,706 | 5,785,138 | 924,542 | 12,978,946 | 2,962,378 |
| 2034 | 6,211,106 | 6,029,449 | 13,516,351 | 537,666 | 4,747,920 | 108,783 | 5,842,989 | 933,747 | 13,108,736 | 2,992,002 |
| 2035 | 6,273,217 | 6,089,743 | 13,651,515 | 543,043 | 4,795,399 | 109,871 | 5,901,419 | 943,085 | 13,239,823 | 3,021,922 |
| TOTAL | 241,142,864 | 208,902,075 | 376,852,629 | 20,181,075 | 158,627,375 | 4,257,332 | 200,368,337 | 35,909,046 | 462,454,765 | 109,740,329 |

**TABLE B-16A. Minimum OMP&R Component of
Transportation Charge for Each Contractor**

(in dollars)

Sheet 4 of 4

| Calendar Year | SOUTHERN CALIFORNIA AREA (continued) | | | | FEATHER RIVER AREA | | | | South Bay Area Future Contractor | GRAND TOTAL |
|------------------|--|---|--|---------------|-------------------------|-----------------------|----------------------------|---------|---|----------------|
| | San Geronio Pass Water Agency | The Metropolitan Water District of Southern California | Ventura County Flood Control District | Total | City of Yuba City | County of Butte | Plumas County FC&WCD | Total | | |
| | [30] | [31] | [32] | [33] | [34] | [35] | [36] | [37] | [38] | [39] |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3,219 | 42,918 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12,626 | 168,358 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13,938 | 184,729 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 28,937 | 378,875 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 31,321 | 408,396 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 47,718 | 634,505 |
| 1968 | 8,821 | 972,734 | 9,504 | 1,218,520 | 0 | 0 | 0 | 0 | 46,945 | 2,745,159 |
| 1969 | 11,704 | 1,295,607 | 12,610 | 1,654,809 | 0 | 0 | 0 | 0 | 52,963 | 4,074,937 |
| 1970 | 14,623 | 1,624,569 | 15,746 | 2,069,926 | 0 | 0 | 0 | 0 | 69,744 | 4,676,285 |
| 1971 | 24,302 | 2,716,584 | 26,118 | 3,421,554 | 0 | 0 | 54 | 54 | 55,532 | 6,185,714 |
| 1972 | 89,131 | 8,038,463 | 68,369 | 10,035,858 | 0 | 0 | 40 | 40 | 80,412 | 12,998,870 |
| 1973 | 117,779 | 9,890,316 | 78,313 | 12,289,297 | 0 | 0 | 1 | 1 | 54,219 | 15,194,233 |
| 1974 | 128,169 | 11,581,491 | 83,453 | 14,166,551 | 0 | 0 | 143 | 143 | 76,783 | 17,372,560 |
| 1975 | 147,899 | 13,584,548 | 101,893 | 16,593,957 | 0 | 0 | 1,069 | 1,069 | 84,547 | 20,517,423 |
| 1976 | 158,664 | 12,862,489 | 94,799 | 16,037,418 | 0 | 0 | 139 | 139 | 106,717 | 20,027,212 |
| 1977 | 178,774 | 16,203,699 | 121,966 | 19,892,685 | 0 | 0 | 892 | 892 | 98,618 | 24,213,491 |
| 1978 | 186,384 | 17,811,770 | 132,435 | 21,568,748 | 0 | 0 | 39 | 39 | 100,786 | 26,012,788 |
| 1979 | 186,688 | 16,414,289 | 126,756 | 20,238,759 | 0 | 0 | 3,235 | 3,235 | 119,352 | 24,675,595 |
| 1980 | 248,399 | 20,926,898 | 154,096 | 25,901,707 | 0 | 0 | 416 | 416 | 178,812 | 32,038,398 |
| 1981 | 259,244 | 23,731,024 | 186,592 | 29,224,859 | 0 | 0 | 3,847 | 3,847 | 185,347 | 35,516,365 |
| 1982 | 307,955 | 27,994,510 | 209,141 | 34,323,372 | 0 | 0 | 11,075 | 11,075 | 173,894 | 41,811,654 |
| 1983 | 394,524 | 38,953,367 | 326,258 | 47,754,649 | 0 | 0 | 1,928 | 1,928 | 220,926 | 56,802,779 |
| 1984 | 496,808 | 45,597,671 | 382,104 | 56,371,786 | 0 | 0 | 3,765 | 3,765 | 225,959 | 67,072,552 |
| 1985 | 531,765 | 50,064,444 | 416,652 | 61,532,075 | 0 | 0 | 2,888 | 2,888 | 340,322 | 73,228,724 |
| 1986 | 551,066 | 52,858,915 | 442,334 | 64,885,109 | 0 | 0 | 2,787 | 2,787 | 279,227 | 76,682,112 |
| 1987 | 564,352 | 50,737,631 | 411,276 | 62,892,289 | 0 | 0 | 2,388 | 2,388 | 345,116 | 75,240,983 |
| 1988 | 593,787 | 51,262,231 | 406,248 | 63,712,843 | 0 | 0 | 545 | 545 | 365,207 | 76,126,694 |
| 1989 | 576,852 | 52,638,942 | 431,020 | 64,815,348 | 0 | 0 | 1,800 | 1,800 | 422,329 | 78,708,338 |
| 1990 | 667,687 | 61,053,824 | 494,721 | 75,175,234 | 0 | 0 | 788 | 788 | 474,284 | 91,448,066 |
| 1991 | 711,803 | 60,874,529 | 470,139 | 75,935,908 | 0 | 0 | 3,654 | 3,654 | 214,683 | 91,098,893 |
| 1992 | 688,558 | 67,460,598 | 502,131 | 82,396,468 | 0 | 0 | 647 | 647 | 443,676 | 100,077,318 |
| 1993 | 828,208 | 68,749,547 | 538,751 | 85,955,989 | 0 | 0 | 3,630 | 3,630 | 599,571 | 107,321,034 |
| 1994 | 783,691 | 63,898,029 | 473,897 | 80,045,463 | 0 | 0 | 2,279 | 2,279 | 609,966 | 101,233,254 |
| 1995 | 785,191 | 68,079,888 | 523,512 | 85,080,006 | 0 | 0 | 2,906 | 2,906 | 534,971 | 107,378,967 |
| 1996 | 773,653 | 72,757,439 | 561,100 | 89,927,727 | 0 | 0 | 8,007 | 8,007 | 571,857 | 113,585,947 |
| 1997 | 917,372 | 75,655,465 | 564,455 | 94,454,556 | 0 | 0 | 7,449 | 7,449 | 428,638 | 114,939,130 |
| 1998 | 1,000,558 | 80,540,695 | 608,294 | 102,766,206 | 0 | 0 | 0 | 0 | 465,095 | 129,072,818 |
| 1999 | 1,054,702 | 85,257,123 | 629,231 | 107,938,566 | 0 | 0 | 0 | 0 | 571,365 | 135,004,032 |
| 2000 | 966,504 | 82,629,018 | 636,928 | 105,555,105 | 0 | 0 | 0 | 0 | 0 | 131,433,108 |
| 2001 | 950,042 | 93,016,856 | 709,348 | 117,547,373 | 0 | 0 | 0 | 0 | 0 | 146,385,855 |
| 2002 | 926,592 | 85,771,950 | 660,221 | 108,313,899 | 0 | 0 | 0 | 0 | 0 | 144,003,940 |
| 2003 | 1,532,676 | 83,744,266 | 631,601 | 109,146,119 | 0 | 0 | 3,393 | 3,393 | 0 | 140,928,677 |
| 2004 | 1,457,372 | 101,188,966 | 773,959 | 129,136,945 | 0 | 0 | 3,455 | 3,455 | 0 | 158,409,973 |
| 2005 | 1,596,340 | 74,627,763 | 655,802 | 104,816,743 | 0 | 0 | 3,452 | 3,452 | 0 | 131,540,589 |
| 2006 | 1,447,343 | 78,870,408 | 629,039 | 112,767,834 | 0 | 0 | 3,984 | 3,984 | 0 | 139,814,637 |
| 2007 | 2,089,802 | 107,219,400 | 900,993 | 145,074,861 | 0 | 0 | 3,955 | 3,955 | 0 | 177,694,532 |
| 2008 | 2,365,100 | 116,344,345 | 1,012,537 | 159,898,077 | 0 | 0 | 5,345 | 5,345 | 0 | 198,804,827 |
| 2009 | 2,259,617 | 101,411,014 | 844,589 | 141,156,205 | 0 | 0 | 1,524 | 1,524 | 0 | 176,242,304 |
| 2010 | 2,553,155 | 112,332,537 | 890,354 | 158,724,069 | 0 | 0 | 2,729 | 2,729 | 0 | 196,480,316 |
| 2011 | 2,568,802 | 115,496,767 | 942,941 | 163,266,831 | 0 | 0 | 4,452 | 4,452 | 0 | 205,366,480 |
| 2012 | 2,642,938 | 113,601,710 | 920,783 | 161,789,200 | 0 | 0 | 1,863 | 1,863 | 0 | 201,825,183 |
| 2013 | 2,592,600 | 112,563,802 | 915,909 | 159,722,181 | 0 | 0 | 1,793 | 1,793 | 0 | 198,897,402 |
| 2014 | 2,618,526 | 113,689,439 | 925,068 | 161,319,400 | 0 | 0 | 1,811 | 1,811 | 0 | 200,886,373 |
| 2015 | 2,644,293 | 114,781,557 | 933,868 | 162,970,383 | 0 | 0 | 1,829 | 1,829 | 0 | 202,895,248 |
| 2016 | 2,670,736 | 115,929,368 | 943,206 | 164,600,078 | 0 | 0 | 1,847 | 1,847 | 0 | 204,924,190 |
| 2017 | 2,697,444 | 117,088,662 | 952,638 | 166,246,082 | 0 | 0 | 1,866 | 1,866 | 0 | 206,973,435 |
| 2018 | 2,724,418 | 118,259,547 | 962,165 | 167,908,538 | 0 | 0 | 1,884 | 1,884 | 0 | 209,043,165 |
| 2019 | 2,751,662 | 119,442,141 | 971,786 | 169,587,621 | 0 | 0 | 1,903 | 1,903 | 0 | 211,133,593 |
| 2020 | 2,778,596 | 120,573,953 | 980,877 | 171,336,438 | 0 | 0 | 1,922 | 1,922 | 0 | 213,244,935 |
| 2021 | 2,806,380 | 121,779,696 | 990,686 | 173,049,804 | 0 | 0 | 1,941 | 1,941 | 0 | 215,377,385 |
| 2022 | 2,834,444 | 122,997,492 | 1,000,593 | 174,780,301 | 0 | 0 | 1,961 | 1,961 | 0 | 217,531,157 |
| 2023 | 2,862,789 | 124,227,467 | 1,010,599 | 176,528,106 | 0 | 0 | 1,980 | 1,980 | 0 | 219,706,474 |
| 2024 | 2,891,417 | 125,469,740 | 1,020,705 | 178,293,364 | 0 | 0 | 2,000 | 2,000 | 0 | 221,903,530 |
| 2025 | 2,920,330 | 126,724,434 | 1,030,912 | 180,076,311 | 0 | 0 | 2,020 | 2,020 | 0 | 224,122,560 |
| 2026 | 2,949,535 | 127,991,682 | 1,041,221 | 181,877,083 | 0 | 0 | 2,040 | 2,040 | 0 | 226,363,795 |
| 2027 | 2,979,030 | 129,271,599 | 1,051,633 | 183,695,854 | 0 | 0 | 2,061 | 2,061 | 0 | 228,627,437 |
| 2028 | 3,008,820 | 130,564,316 | 1,062,150 | 185,532,812 | 0 | 0 | 2,081 | 2,081 | 0 | 230,913,708 |
| 2029 | 3,038,908 | 131,869,960 | 1,072,771 | 187,388,144 | 0 | 0 | 2,102 | 2,102 | 0 | 233,222,848 |
| 2030 | 3,069,297 | 133,188,658 | 1,083,499 | 189,262,021 | 0 | 0 | 2,123 | 2,123 | 0 | 235,555,073 |
| 2031 | 3,099,990 | 134,520,545 | 1,094,334 | 191,154,643 | 0 | 0 | 2,144 | 2,144 | 0 | 237,910,623 |
| 2032 | 3,130,989 | 135,865,751 | 1,105,277 | 193,066,187 | 0 | 0 | 2,166 | 2,166 | 0 | 240,289,727 |
| 2033 | 3,162,300 | 137,224,406 | 1,116,330 | 194,996,847 | 0 | 0 | 2,187 | 2,187 | 0 | 242,692,624 |
| 2034 | 3,193,923 | 138,596,652 | 1,127,493 | 196,946,817 | 0 | 0 | 2,209 | 2,209 | 0 | 245,119,552 |
| 2035 | 3,225,862 | 139,982,619 | 1,138,768 | 198,916,286 | 0 | 0 | 2,231 | 2,231 | 0 | 247,570,750 |
| TOTAL | 103,997,685 | 5,390,947,815 | 43,345,497 | 7,356,726,824 | 0 | 0 | 146,664 | 146,664 | 8,735,622 | 9,148,536,111 |

**TABLE B-16B. Minimum OMP&R Component of Transportation Charge
for Each Contractor for Off-Aqueduct Power Facilities**

(in dollars)

Sheet 1 of 4

| Calendar Year | NORTH BAY AREA | | | SOUTH BAY AREA | | | | CENTRAL COASTAL AREA | | |
|------------------|--------------------------|------------------------|-----------|--|--|--|------------|--|--------------------------------------|------------|
| | Napa County FC&WCD | Solano County WA | Total | Alameda County FC&WCD, Zone 7 | Alameda County Water District | Santa Clara Valley Water District | Total | San Luis Obispo County FC&WCD | Santa Barbara County FC&WCD | Total |
| | [1] | [2] | [3] | [4] | [5] | [6] | [7] | [8] | [9] | [10] |
| 1971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1972 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1973 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1974 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1975 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1976 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1977 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1978 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1979 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1980 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1981 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1982 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1983 | 10,070 | 0 | 10,070 | 47,473 | 31,446 | 863,937 | 942,856 | 0 | 0 | 0 |
| 1984 | 29,957 | 0 | 29,957 | 157,280 | 77,388 | 2,040,188 | 2,274,856 | 0 | 0 | 0 |
| 1985 | 54,709 | 0 | 54,709 | 458,427 | 582,679 | 2,696,450 | 3,737,556 | 0 | 0 | 0 |
| 1986 | 45,887 | 0 | 45,887 | 312,938 | 365,147 | 2,595,765 | 3,273,850 | 0 | 0 | 0 |
| 1987 | 90,385 | 0 | 90,385 | 622,029 | 674,111 | 2,306,079 | 3,602,219 | 0 | 0 | 0 |
| 1988 | 115,970 | 114,196 | 230,166 | 616,865 | 804,606 | 2,116,236 | 3,537,707 | 0 | 0 | 0 |
| 1989 | 64,584 | 138,240 | 202,824 | 407,353 | 396,069 | 1,389,347 | 2,192,769 | 0 | 0 | 0 |
| 1990 | 77,126 | 138,805 | 215,931 | 535,269 | 514,372 | 1,490,250 | 2,539,891 | 0 | 0 | 0 |
| 1991 | 35,178 | 245,181 | 280,359 | 355,578 | 477,883 | 1,065,488 | 1,898,949 | 0 | 165,930 | 165,930 |
| 1992 | 74,573 | 230,716 | 305,289 | 405,244 | 529,119 | 1,183,466 | 2,117,829 | 0 | 0 | 0 |
| 1993 | 89,214 | 247,977 | 337,191 | 841,383 | 256,930 | 1,552,562 | 2,650,875 | 0 | 0 | 0 |
| 1994 | 111,942 | 229,598 | 341,540 | 501,812 | 559,683 | 1,395,238 | 2,456,733 | 0 | 0 | 0 |
| 1995 | 96,842 | 235,605 | 332,447 | 833,227 | 492,578 | 796,524 | 2,122,329 | 0 | 0 | 0 |
| 1996 | 63,698 | 205,414 | 269,112 | 367,297 | 304,845 | 1,189,291 | 1,861,433 | 711 | 105 | 816 |
| 1997 | 48,518 | 193,255 | 241,773 | 455,751 | 294,951 | 1,220,497 | 1,971,199 | 44,788 | 298,986 | 343,774 |
| 1998 | 82,317 | 251,217 | 333,534 | 380,321 | 380,282 | 1,103,662 | 1,864,265 | 198,376 | 1,028,220 | 1,226,596 |
| 1999 | 58,017 | 195,562 | 253,579 | 559,900 | 446,655 | 1,039,572 | 2,046,127 | 147,204 | 791,946 | 939,150 |
| 2000 | 28,759 | 128,393 | 157,152 | 374,808 | 237,138 | 748,820 | 1,360,766 | 82,628 | 474,268 | 556,896 |
| 2001 | 81,666 | 157,196 | 238,862 | 396,340 | 233,205 | 673,431 | 1,302,976 | 134,574 | 595,294 | 729,868 |
| 2002 | 40,384 | 128,219 | 168,603 | 384,774 | 230,122 | 521,729 | 1,136,625 | 91,976 | 586,079 | 678,055 |
| 2003 | 37,618 | 92,735 | 130,353 | 301,657 | 180,804 | 643,729 | 1,126,190 | 78,771 | 477,048 | 555,819 |
| 2004 | 50,258 | 128,102 | 178,360 | 447,529 | 209,965 | 546,009 | 1,203,503 | 92,779 | 661,706 | 754,485 |
| 2005 | 53,455 | 149,328 | 202,783 | 452,896 | 265,252 | 772,420 | 1,490,568 | 106,901 | 587,036 | 693,937 |
| 2006 | 59,239 | 127,708 | 186,947 | 476,295 | 277,304 | 798,098 | 1,551,697 | 109,498 | 605,502 | 715,000 |
| 2007 | 82,724 | 182,954 | 265,678 | 445,250 | 246,862 | 740,211 | 1,432,323 | 103,331 | 759,114 | 862,445 |
| 2008 | 199,675 | 303,726 | 503,401 | 859,372 | 427,644 | 1,072,235 | 2,359,251 | 184,139 | 994,857 | 1,178,996 |
| 2009 | 168,221 | 238,716 | 406,937 | 711,710 | 420,050 | 1,275,629 | 2,407,389 | 211,079 | 858,024 | 1,069,103 |
| 2010 | 304,217 | 326,000 | 630,217 | 1,618,188 | 473,720 | 1,769,549 | 3,861,457 | 455,500 | 2,284,419 | 2,739,919 |
| 2011 | 213,203 | 154,972 | 368,175 | 703,860 | 317,711 | 1,041,365 | 2,062,936 | 186,284 | 1,752,136 | 1,938,420 |
| 2012 | 263,146 | 154,573 | 417,719 | 932,693 | 461,412 | 1,147,537 | 2,541,642 | 185,574 | 1,747,625 | 1,933,199 |
| 2013 | 149,854 | 88,024 | 237,878 | 542,018 | 290,203 | 653,487 | 1,485,708 | 105,679 | 995,219 | 1,100,898 |
| 2014 | 37,124 | 21,807 | 58,931 | 134,279 | 71,981 | 187,087 | 393,347 | 135,511 | 246,554 | 382,065 |
| 2015 | 20,053 | 15,067 | 35,120 | 79,282 | 39,377 | 107,871 | 226,530 | 69,797 | 126,991 | 196,788 |
| 2016 | 17,567 | 12,887 | 30,454 | 66,920 | 33,679 | 92,262 | 192,861 | 59,697 | 108,615 | 168,312 |
| 2017 | 17,261 | 12,370 | 29,631 | 65,092 | 32,329 | 88,564 | 185,985 | 57,304 | 104,261 | 161,565 |
| 2018 | 7,195 | 5,040 | 12,235 | 26,521 | 13,172 | 36,084 | 75,777 | 23,348 | 42,480 | 65,828 |
| 2019 | 7,313 | 5,010 | 12,323 | 26,360 | 13,092 | 35,865 | 75,317 | 23,206 | 42,222 | 65,428 |
| 2020 | 8,061 | 5,408 | 13,469 | 28,455 | 14,133 | 38,715 | 81,303 | 25,050 | 45,578 | 70,628 |
| 2021 | 12,728 | 8,509 | 21,237 | 44,774 | 22,238 | 60,919 | 127,931 | 39,417 | 71,717 | 111,134 |
| 2022 | 12,071 | 8,070 | 20,141 | 42,464 | 21,090 | 57,776 | 121,330 | 37,383 | 68,017 | 105,400 |
| 2023 | 8,547 | 5,714 | 14,261 | 30,065 | 14,933 | 40,907 | 85,905 | 26,468 | 48,158 | 74,626 |
| 2024 | 6,189 | 4,138 | 10,327 | 21,772 | 10,814 | 29,623 | 62,209 | 19,167 | 34,874 | 54,041 |
| 2025 | 705 | 471 | 1,176 | 2,480 | 1,232 | 3,374 | 7,086 | 2,183 | 3,972 | 6,155 |
| 2026 | 973 | 651 | 1,624 | 3,424 | 1,700 | 4,658 | 9,782 | 3,014 | 5,484 | 8,498 |
| 2027 | 1,610 | 1,076 | 2,686 | 5,663 | 2,813 | 7,706 | 16,182 | 4,986 | 9,071 | 14,057 |
| 2028 | 952 | 637 | 1,589 | 3,350 | 1,664 | 4,558 | 9,572 | 2,949 | 5,366 | 8,315 |
| 2029 | 945 | 632 | 1,577 | 3,325 | 1,651 | 4,524 | 9,500 | 2,927 | 5,325 | 8,252 |
| 2030 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2031 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2032 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2033 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2034 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2035 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 3,040,700 | 4,893,899 | 7,934,599 | 17,089,763 | 11,756,034 | 39,249,294 | 68,095,091 | 3,052,199 | 16,632,199 | 19,684,398 |

**TABLE B-16B. Minimum OMP&R Component of Transportation Charge
for Each Contractor for Off-Aqueduct Power Facilities**

(in dollars)

Sheet 2 of 4

| Calendar Year | SAN JOAQUIN VALLEY AREA | | | | | | | |
|----------------------|-----------------------------------|---|--------------------------------|--------------|-----------------------|-------------------------------|---|-------------|
| | Dudley Ridge Water District | Empire West Side Irrigation District | Kern County Water Agency | | County of Kings | Oak Flat Water District | Tulare Lake Basin Water Storage District | Total |
| | | | Municipal and Industrial | Agricultural | | | | |
| | [11] | [12] | [13] | [14] | [15] | [16] | [17] | [18] |
| 1971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1972 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1973 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1974 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1975 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1976 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1977 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1978 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1979 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1980 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1981 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1982 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1983 | 159,191 | 0 | 34,366 | 2,964,185 | 13,174 | 9,673 | 3,733 | 3,184,322 |
| 1984 | 389,518 | 0 | 816,103 | 9,095,509 | 26,774 | 33,576 | 49,601 | 10,411,081 |
| 1985 | 527,952 | 59,322 | 1,053,957 | 11,978,046 | 38,810 | 42,297 | 1,253,257 | 14,953,641 |
| 1986 | 552,172 | 12,858 | 885,988 | 11,788,714 | 40,659 | 38,275 | 872,008 | 14,190,674 |
| 1987 | 450,941 | 24,936 | 1,192,388 | 10,448,063 | 39,134 | 37,538 | 911,938 | 13,104,938 |
| 1988 | 425,261 | 31,146 | 1,130,988 | 9,910,050 | 35,851 | 26,779 | 850,225 | 12,410,300 |
| 1989 | 331,852 | 17,226 | 607,908 | 7,400,983 | 22,959 | 24,306 | 754,007 | 9,159,241 |
| 1990 | 219,381 | 7,731 | 428,482 | 5,216,562 | 12,089 | 12,046 | 344,943 | 6,241,234 |
| 1991 | 13,048 | 3,111 | 570,942 | 146,276 | 0 | 1,354 | 30,685 | 765,416 |
| 1992 | 244,630 | 13,395 | 706,155 | 5,788,599 | 18,587 | 15,716 | 480,903 | 7,267,985 |
| 1993 | 471,706 | 25,543 | 1,202,455 | 11,405,212 | 37,276 | 36,803 | 1,159,908 | 14,338,903 |
| 1994 | 262,029 | 15,161 | 901,463 | 6,786,208 | 19,257 | 19,061 | 567,521 | 8,570,700 |
| 1995 | 626,214 | 16,830 | 1,486,494 | 12,489,555 | 41,275 | 36,377 | 1,051,178 | 15,747,923 |
| 1996 | 407,919 | 13,446 | 1,226,968 | 9,219,091 | 28,668 | 24,001 | 1,691,135 | 12,611,228 |
| 1997 | 423,144 | (6) | 794,476 | 7,471,645 | (31) | 22,025 | 137,304 | 8,848,557 |
| 1998 | 471,993 | 4,597 | 837,228 | 8,366,817 | 127 | 25,458 | 175,371 | 9,881,591 |
| 1999 | 360,554 | 19,182 | 874,948 | 7,723,883 | 24,159 | 20,065 | 1,749,925 | 10,772,716 |
| 2000 | 193,895 | 5,762 | 392,659 | 4,215,772 | 11,530 | 9,847 | 667,127 | 5,496,592 |
| 2001 | 200,485 | 6,563 | 113,854 | 2,948,087 | 7,528 | 11,821 | 287,409 | 3,575,747 |
| 2002 | 153,869 | 4,557 | 309,688 | 2,803,477 | 9,257 | 10,806 | 301,042 | 3,592,696 |
| 2003 | 125,188 | 3,901 | 301,142 | 2,626,386 | 10,030 | 7,904 | 287,531 | 3,362,082 |
| 2004 | 167,903 | 12,186 | 431,994 | 2,937,167 | 30,970 | 10,800 | 278,035 | 3,869,055 |
| 2005 | 315,142 | 14,807 | 358,007 | 5,609,958 | 76,490 | 11,047 | 540,681 | 6,926,132 |
| 2006 | 287,977 | 13,112 | 401,503 | 5,488,668 | 38,075 | 11,559 | 432,313 | 6,673,207 |
| 2007 | 189,684 | 8,758 | 242,253 | 3,662,405 | 24,280 | 10,224 | 365,975 | 4,503,579 |
| 2008 | 184,212 | 7,867 | 387,090 | 3,913,852 | 31,868 | 11,247 | 281,659 | 4,817,795 |
| 2009 | 180,887 | 8,819 | 60,218 | 4,674,198 | 28,921 | 11,593 | 313,882 | 5,278,518 |
| 2010 | 372,742 | 14,301 | 789,256 | 7,534,108 | 51,578 | 22,880 | 460,660 | 9,245,525 |
| 2011 | 297,815 | 17,747 | 856,970 | 6,338,218 | 56,197 | 22,998 | 526,038 | 8,115,983 |
| 2012 | 338,352 | 17,701 | 848,144 | 6,411,787 | 56,053 | 21,329 | 524,683 | 8,218,049 |
| 2013 | 192,681 | 10,080 | 482,992 | 3,651,316 | 31,920 | 12,146 | 298,791 | 4,679,926 |
| 2014 | 47,734 | 2,497 | 119,656 | 904,570 | 7,908 | 3,009 | 74,022 | 1,159,396 |
| 2015 | 24,586 | 1,286 | 61,630 | 465,912 | 4,073 | 1,667 | 38,126 | 597,280 |
| 2016 | 21,029 | 1,100 | 52,712 | 398,494 | 3,484 | 1,426 | 32,609 | 510,854 |
| 2017 | 20,186 | 1,056 | 50,599 | 382,520 | 3,344 | 1,368 | 31,302 | 490,375 |
| 2018 | 8,224 | 430 | 20,616 | 155,854 | 1,363 | 558 | 12,754 | 199,799 |
| 2019 | 8,175 | 428 | 20,491 | 154,908 | 1,354 | 554 | 12,676 | 198,586 |
| 2020 | 8,824 | 462 | 22,119 | 167,218 | 1,462 | 598 | 13,684 | 214,367 |
| 2021 | 13,885 | 726 | 34,805 | 263,119 | 2,300 | 941 | 21,531 | 337,307 |
| 2022 | 13,168 | 689 | 33,009 | 249,543 | 2,182 | 893 | 20,420 | 319,904 |
| 2023 | 9,324 | 488 | 23,372 | 176,684 | 1,545 | 632 | 14,458 | 226,503 |
| 2024 | 6,752 | 353 | 16,925 | 127,948 | 1,119 | 458 | 10,470 | 164,025 |
| 2025 | 769 | 40 | 1,928 | 14,573 | 127 | 52 | 1,193 | 18,682 |
| 2026 | 1,062 | 56 | 2,661 | 20,120 | 176 | 72 | 1,646 | 25,793 |
| 2027 | 1,756 | 92 | 4,402 | 33,282 | 291 | 119 | 2,723 | 42,665 |
| 2028 | 1,039 | 54 | 2,604 | 19,687 | 172 | 70 | 1,611 | 25,237 |
| 2029 | 1,031 | 54 | 2,584 | 19,538 | 171 | 70 | 1,599 | 25,047 |
| 2030 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2031 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2032 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2033 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2034 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2035 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 9,725,881 | 420,450 | 21,197,192 | 204,568,767 | 894,536 | 624,038 | 17,940,292 | 255,371,156 |

**TABLE B-16B. Minimum OMP&R Component of Transportation Charge
for Each Contractor for Off-Aqueduct Power Facilities**

(in dollars)

Sheet 3 of 4

| Calendar Year | SOUTHERN CALIFORNIA AREA | | | | | | | | | |
|------------------|---|------------------------------------|--|--|---------------------------|---|---------------------------|-------------------------------|--|---|
| | Antelope Valley- East Kern Water Agency | Castaic Lake Water Agency | Coachella Valley Water District | Crestline- Lake Arrowhead Water Agency | Desert Water Agency | Littlerock Creek Irrigation District | Mojave Water Agency | Palmdale Water District | San Bernardino Valley Municipal Water District | San Gabriel Valley Municipal Water District |
| | [19] | [20] | [21] | [22] | [23] | [24] | [25] | [26] | [27] | [28] |
| 1971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1972 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1973 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1974 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1975 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1976 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1977 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1978 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1979 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1980 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1981 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1982 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1983 | 1,083,881 | 411,247 | 565,798 | 35,432 | 894,572 | 1,250 | 0 | 0 | 233,134 | 28,548 |
| 1984 | 2,499,848 | 1,122,640 | 1,427,428 | 102,114 | 2,263,172 | 77 | 0 | 0 | 502,967 | 693,074 |
| 1985 | 3,749,257 | 1,572,025 | 2,032,672 | 170,137 | 3,230,451 | 0 | 0 | 157,601 | 884,188 | 601,583 |
| 1986 | 3,159,857 | 1,694,487 | 2,097,408 | 173,460 | 3,340,188 | 15,873 | 0 | 301,486 | 739,563 | 1,088,901 |
| 1987 | 3,167,759 | 1,694,698 | 1,991,841 | 190,149 | 3,230,424 | 95,994 | 1,786 | 258,719 | 1,951,799 | 1,091,691 |
| 1988 | 2,688,113 | 1,776,471 | 1,940,156 | 187,156 | 3,194,137 | 30,395 | 846 | 126,639 | 2,000,664 | 839,774 |
| 1989 | 2,357,669 | 1,348,806 | 1,326,863 | 132,076 | 2,218,516 | 50,948 | 13,206 | 493,424 | 1,257,332 | 792,087 |
| 1990 | 2,528,625 | 1,335,341 | 1,463,452 | 115,746 | 2,413,745 | 110,678 | 0 | 545,342 | 1,192,997 | 1,054,762 |
| 1991 | 1,048,414 | 531,160 | 1,022,405 | 125,256 | 1,686,304 | 65,111 | 473,291 | 488,207 | 540,119 | 796,531 |
| 1992 | 2,760,199 | 1,548,472 | 1,124,775 | 55,985 | 1,855,065 | 22,891 | 1,130,876 | 367,996 | 362,232 | 853,047 |
| 1993 | 3,559,487 | 1,332,392 | 2,256,338 | 29,498 | 3,721,492 | 60,615 | 1,101,799 | 640,919 | 425,969 | 1,406,255 |
| 1994 | 3,963,982 | 1,450,328 | 1,345,145 | 74,879 | 2,218,411 | 88,549 | 1,371,116 | 678,876 | 871,358 | 1,452,741 |
| 1995 | 4,324,009 | 1,901,361 | 2,498,462 | 44,237 | 4,120,837 | 43,892 | 881,146 | 636,541 | 75,278 | 1,397,623 |
| 1996 | 3,572,856 | 1,507,542 | 4,652,945 | 77,384 | 7,674,388 | 31,691 | 760,763 | 723,670 | 458,246 | 1,201,941 |
| 1997 | 3,411,379 | 1,468,949 | 4,294,703 | 42,135 | 4,319,206 | 24,319 | 891,191 | 648,652 | 625,340 | 1,175,556 |
| 1998 | 3,977,988 | 1,599,394 | 7,554,910 | 16,624 | 6,174,031 | 30,365 | 508,248 | 657,806 | 166,952 | 827,650 |
| 1999 | 3,696,973 | 1,694,851 | 3,195,685 | 71,662 | 3,678,076 | 18,305 | 501,486 | 710,674 | 815,001 | 1,375,575 |
| 2000 | 2,372,130 | 994,396 | 1,420,806 | 40,083 | 1,954,947 | 0 | 374,972 | 257,146 | 617,664 | 508,258 |
| 2001 | 2,680,895 | 1,418,179 | 460,256 | 53,460 | 759,169 | 0 | 213,385 | 445,872 | 1,339,699 | 119,363 |
| 2002 | 1,674,587 | 1,389,921 | 569,606 | 74,418 | 939,655 | 0 | 140,550 | 531,620 | 2,422,881 | 844,839 |
| 2003 | 1,445,146 | 1,353,956 | 411,258 | 44,506 | 678,236 | 0 | 405,376 | 277,984 | 780,631 | 624,561 |
| 2004 | 1,812,210 | 1,676,067 | 554,535 | 71,930 | 759,819 | 0 | 465,681 | 368,704 | 2,071,504 | 449,688 |
| 2005 | 2,047,638 | 1,443,555 | 1,721,141 | 32,667 | 1,987,091 | 0 | 542,366 | 400,828 | 1,568,493 | 566,063 |
| 2006 | 2,845,985 | 1,617,750 | 5,071,235 | 26,843 | 2,093,821 | 0 | 1,417,777 | 442,278 | 1,533,665 | 681,916 |
| 2007 | 2,990,954 | 1,864,667 | 3,225,680 | 77,880 | 1,331,802 | 0 | 2,023,088 | 710,515 | 2,639,102 | 177,256 |
| 2008 | 3,554,245 | 3,295,084 | 4,074,379 | 59,995 | 2,231,880 | 1,840 | 2,194,726 | 1,049,518 | 3,750,093 | 627,993 |
| 2009 | 3,362,749 | 3,027,661 | 4,088,560 | 80,360 | 1,632,625 | 3,174 | 2,578,052 | 1,159,236 | 3,880,225 | 1,029,810 |
| 2010 | 10,240,034 | 4,626,953 | 7,997,146 | 496,806 | 3,233,235 | 97,162 | 3,674,827 | 1,533,591 | 6,724,295 | 1,439,024 |
| 2011 | 3,608,372 | 1,732,199 | 4,289,267 | 207,100 | 1,728,418 | 120,574 | 5,121,450 | 1,116,624 | 6,361,818 | 992,096 |
| 2012 | 3,576,179 | 1,985,779 | 8,556,447 | 222,647 | 3,447,936 | 120,264 | 3,785,370 | 1,113,749 | 6,345,439 | 1,781,176 |
| 2013 | 2,036,524 | 1,150,007 | 4,872,634 | 131,017 | 1,963,494 | 68,487 | 2,349,360 | 634,246 | 3,613,532 | 1,014,325 |
| 2014 | 504,525 | 284,900 | 1,207,137 | 34,343 | 486,432 | 16,967 | 582,026 | 157,127 | 895,209 | 251,287 |
| 2015 | 537,257 | 388,051 | 621,753 | 26,066 | 250,544 | 8,739 | 339,733 | 80,930 | 461,091 | 129,429 |
| 2016 | 459,515 | 331,900 | 531,785 | 22,294 | 214,290 | 7,474 | 290,573 | 69,220 | 394,370 | 110,700 |
| 2017 | 441,095 | 318,596 | 510,468 | 21,400 | 205,700 | 7,175 | 278,926 | 66,445 | 378,562 | 106,263 |
| 2018 | 179,720 | 129,809 | 207,985 | 8,719 | 83,811 | 2,923 | 113,646 | 27,072 | 154,241 | 43,296 |
| 2019 | 178,629 | 129,021 | 206,723 | 8,666 | 83,302 | 2,906 | 112,956 | 26,908 | 153,305 | 43,033 |
| 2020 | 192,824 | 139,273 | 223,150 | 9,355 | 89,921 | 3,136 | 121,932 | 29,046 | 165,487 | 46,453 |
| 2021 | 303,410 | 219,148 | 351,128 | 14,720 | 141,492 | 4,935 | 191,860 | 45,705 | 260,396 | 73,094 |
| 2022 | 287,755 | 207,841 | 333,012 | 13,961 | 134,192 | 4,681 | 181,961 | 43,346 | 246,961 | 69,322 |
| 2023 | 203,739 | 147,157 | 235,782 | 9,885 | 95,012 | 3,314 | 128,834 | 30,691 | 174,855 | 49,082 |
| 2024 | 147,540 | 106,566 | 170,745 | 7,158 | 68,804 | 2,400 | 93,297 | 22,225 | 126,624 | 35,544 |
| 2025 | 16,805 | 12,138 | 19,448 | 815 | 7,837 | 273 | 10,626 | 2,531 | 14,422 | 4,048 |
| 2026 | 23,201 | 16,758 | 26,850 | 1,126 | 10,820 | 377 | 14,671 | 3,495 | 19,912 | 5,589 |
| 2027 | 38,378 | 27,720 | 44,414 | 1,862 | 17,897 | 624 | 24,268 | 5,781 | 32,937 | 9,246 |
| 2028 | 22,701 | 16,397 | 26,272 | 1,101 | 10,586 | 369 | 14,355 | 3,420 | 19,483 | 5,469 |
| 2029 | 22,530 | 16,273 | 26,073 | 1,093 | 10,506 | 366 | 14,246 | 3,394 | 19,336 | 5,428 |
| 2030 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2031 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2032 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2033 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2034 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2035 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 99,357,568 | 54,057,886 | 92,846,661 | 3,446,206 | 82,886,289 | 1,169,113 | 35,436,644 | 18,095,799 | 60,269,371 | 28,520,990 |

**TABLE B-16B. Minimum OMP&R Component of Transportation Charge
for Each Contractor for Off-Aqueduct Power Facilities**

(in dollars)

Sheet 4 of 4

| Calendar Year | SOUTHERN CALIFORNIA AREA (continued) | | | | FEATHER RIVER AREA | | | | TOTAL STATE WATER PROJECT (a) |
|------------------|--|--|---|---------------|----------------------|--------------------|----------------------------|-------|--|
| | San Geronio Pass Water Agency | The Metropolitan Water District of Southern California | Ventura County Flood Control District | Total | City of Yuba City | County of Butte | Plumas County FC&WCD | Total | |
| | [29] | [30] | [31] | [32] | [33] | [34] | [35] | [36] | [37] |
| 1971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1972 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1973 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1974 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1975 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1976 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1977 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1978 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1979 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1980 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1981 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1982 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1983 | 0 | 12,791,358 | 0 | 16,045,220 | 0 | 0 | 0 | 0 | 20,182,468 |
| 1984 | 0 | 39,229,567 | 0 | 47,840,887 | 0 | 0 | 0 | 0 | 60,556,781 |
| 1985 | 0 | 77,446,523 | 0 | 89,844,437 | 0 | 0 | 0 | 0 | 108,590,343 |
| 1986 | 0 | 77,581,287 | 0 | 90,192,510 | 0 | 0 | 0 | 0 | 107,702,921 |
| 1987 | 0 | 68,939,195 | 0 | 82,614,055 | 0 | 0 | 0 | 0 | 99,411,597 |
| 1988 | 0 | 79,936,309 | 0 | 92,720,660 | 0 | 0 | 0 | 0 | 108,898,833 |
| 1989 | 0 | 68,311,546 | 0 | 78,302,473 | 0 | 0 | 0 | 0 | 89,857,307 |
| 1990 | 0 | 83,964,409 | 277,885 | 95,002,982 | 0 | 0 | 0 | 0 | 104,000,038 |
| 1991 | 0 | 54,214,229 | 132,209 | 61,123,236 | 0 | 0 | 0 | 0 | 64,233,890 |
| 1992 | 0 | 72,401,054 | 0 | 82,482,592 | 0 | 0 | 0 | 0 | 92,173,695 |
| 1993 | 0 | 55,312,615 | 0 | 69,847,379 | 0 | 0 | 0 | 0 | 87,174,348 |
| 1994 | 0 | 72,838,621 | 0 | 86,354,006 | 0 | 0 | 0 | 0 | 97,722,979 |
| 1995 | 0 | 40,862,813 | 0 | 56,786,199 | 0 | 0 | 0 | 0 | 74,988,898 |
| 1996 | 0 | 36,536,259 | 401 | 57,198,086 | 0 | 0 | 0 | 0 | 71,940,675 |
| 1997 | 0 | 37,121,379 | 108,559 | 54,131,368 | 0 | 0 | 0 | 0 | 65,536,671 |
| 1998 | 0 | 30,341,609 | 149,170 | 52,004,747 | 0 | 0 | 0 | 0 | 65,310,733 |
| 1999 | 0 | 42,257,580 | 106,226 | 58,122,094 | 0 | 0 | 0 | 0 | 72,133,666 |
| 2000 | 0 | 43,977,877 | 123,318 | 52,641,597 | 0 | 0 | 0 | 0 | 60,213,003 |
| 2001 | 0 | 49,405,276 | 84,868 | 56,980,422 | 0 | 0 | 0 | 0 | 62,827,875 |
| 2002 | 0 | 45,579,833 | 154,113 | 54,322,023 | 0 | 0 | 0 | 0 | 59,898,002 |
| 2003 | 3,303 | 41,917,356 | 129,134 | 48,071,447 | 0 | 0 | 0 | 0 | 53,245,891 |
| 2004 | 44,621 | 58,640,223 | 170,747 | 67,085,729 | 0 | 0 | 0 | 0 | 73,091,132 |
| 2005 | 41,448 | 56,220,579 | 61,131 | 66,633,000 | 0 | 0 | 0 | 0 | 75,946,420 |
| 2006 | 265,078 | 60,701,335 | 70,268 | 76,767,951 | 0 | 0 | 0 | 0 | 85,894,802 |
| 2007 | 248,328 | 61,354,857 | 119,861 | 76,763,990 | 0 | 0 | 0 | 0 | 83,828,015 |
| 2008 | 615,414 | 71,612,597 | 299,963 | 93,367,727 | 0 | 0 | 0 | 0 | 102,227,170 |
| 2009 | 826,336 | 71,808,806 | 315,486 | 93,793,080 | 0 | 0 | 0 | 0 | 102,955,027 |
| 2010 | 1,432,722 | 84,285,823 | 902,901 | 126,684,519 | 0 | 0 | 0 | 0 | 143,161,637 |
| 2011 | 824,863 | 99,733,829 | 1,068,565 | 126,905,175 | 0 | 0 | 0 | 0 | 139,390,689 |
| 2012 | 1,536,575 | 93,868,441 | 1,121,909 | 127,461,911 | 0 | 0 | 0 | 0 | 140,572,520 |
| 2013 | 875,032 | 53,455,194 | 638,893 | 72,802,745 | 0 | 0 | 0 | 0 | 80,307,155 |
| 2014 | 216,779 | 13,242,885 | 158,278 | 18,037,895 | 0 | 0 | 0 | 0 | 20,031,634 |
| 2015 | 111,655 | 7,636,176 | 81,523 | 10,672,947 | 0 | 0 | 0 | 0 | 11,728,665 |
| 2016 | 95,498 | 6,531,213 | 69,727 | 9,128,559 | 0 | 0 | 0 | 0 | 10,031,040 |
| 2017 | 91,670 | 6,269,406 | 66,932 | 8,762,638 | 0 | 0 | 0 | 0 | 9,630,194 |
| 2018 | 37,350 | 2,554,409 | 27,271 | 3,570,252 | 0 | 0 | 0 | 0 | 3,923,891 |
| 2019 | 37,123 | 2,538,901 | 27,105 | 3,548,578 | 0 | 0 | 0 | 0 | 3,900,232 |
| 2020 | 40,073 | 2,740,655 | 29,259 | 3,830,564 | 0 | 0 | 0 | 0 | 4,210,331 |
| 2021 | 63,056 | 4,312,445 | 46,039 | 6,027,428 | 0 | 0 | 0 | 0 | 6,625,037 |
| 2022 | 59,803 | 4,089,944 | 43,664 | 5,716,443 | 0 | 0 | 0 | 0 | 6,283,218 |
| 2023 | 42,342 | 2,895,798 | 30,915 | 4,047,406 | 0 | 0 | 0 | 0 | 4,448,701 |
| 2024 | 30,663 | 2,097,033 | 22,388 | 2,930,987 | 0 | 0 | 0 | 0 | 3,221,589 |
| 2025 | 3,492 | 238,849 | 2,550 | 333,834 | 0 | 0 | 0 | 0 | 366,933 |
| 2026 | 4,822 | 329,766 | 3,521 | 460,908 | 0 | 0 | 0 | 0 | 506,605 |
| 2027 | 7,976 | 545,479 | 5,824 | 762,406 | 0 | 0 | 0 | 0 | 837,996 |
| 2028 | 4,718 | 322,659 | 3,445 | 450,975 | 0 | 0 | 0 | 0 | 495,688 |
| 2029 | 4,682 | 320,218 | 3,419 | 447,564 | 0 | 0 | 0 | 0 | 491,940 |
| 2030 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2031 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2032 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2033 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2034 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2035 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 7,565,422 | 1,899,314,215 | 6,657,467 | 2,389,623,631 | 0 | 0 | 0 | 0 | 2,740,708,875 |

(a) Costs allocated to contractors in 1989 through 2002 are reduced by credits for Off-Aqueduct Power Facility costs allocated to the pumping of non-SWP water.

TABLE B-17. Unit Variable OMP&R Component of Transportation Charge

(in dollars per acre-foot)

Sheet 1 of 5

| Calendar Year | NORTH BAY AQUEDUCT | | | | | | SOUTH BAY AQUEDUCT | | CALIFORNIA AQUEDUCT | |
|------------------|---|-------------------------|--|-------------------------|--|-------------------------|--|-------------------------|-----------------------------------|-------------------------|
| | Reach 1 Barker Slough Pumping Plant | | Reach 3A Cordelia Pumping Plant Solano County WA | | Reach 3B Cordelia Pumping Plant Napa County FC&WCD (a) | | Reach 1 South Bay and Del Valle Pumping Plants (b) | | Reach 1 Banks Pumping Plant | |
| | Unit Rate | Cumulative Unit Rate | Unit Rate | Cumulative Unit Rate | Unit Rate | Cumulative Unit Rate | Unit Rate | Cumulative Unit Rate | Unit Rate | Cumulative Unit Rate |
| | [1] | [2] | [3] | [4] | [5] | [6] | [7] | [8] | [9] | [10] |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 4.1511341 | 4.1511341 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 4.5639383 | 4.5639383 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 3.5452154 | 3.5452154 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 4.1911773 | 4.1911773 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 3.5074573 | 3.5074573 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 3.9306767 | 4.1752198 | 0.2445431 | 0.2445431 |
| 1968 | 0 | 0 | 0 | 0 | 5.7570017 | 5.7570017 | 3.3315620 | 4.8750942 | 1.5435322 | 1.5435322 |
| 1969 | 0 | 0 | 0 | 0 | 3.1823595 | 3.1823595 | 3.6949019 | 4.8016170 | 1.1067151 | 1.1067151 |
| 1970 | 0 | 0 | 0 | 0 | 3.7584301 | 3.7584301 | 4.4256141 | 5.3721490 | 0.9465349 | 0.9465349 |
| 1971 | 0 | 0 | 0 | 0 | 4.2082507 | 4.2082507 | 3.8714396 | 4.7522833 | 0.8808437 | 0.8808437 |
| 1972 | 0 | 0 | 0 | 0 | 3.9577735 | 3.9577735 | 4.3250690 | 5.2281686 | 0.9030996 | 0.9030996 |
| 1973 | 0 | 0 | 0 | 0 | 3.8103903 | 3.8103903 | 5.2455409 | 6.1841800 | 0.9386391 | 0.9386391 |
| 1974 | 0 | 0 | 0 | 0 | 3.5878850 | 3.5878850 | 6.3321503 | 7.2293909 | 0.8972406 | 0.8972406 |
| 1975 | 0 | 0 | 0 | 0 | 2.1606725 | 2.1606725 | 3.7365711 | 4.8327731 | 1.0962020 | 1.0962020 |
| 1976 | 0 | 0 | 0 | 0 | 2.9283909 | 2.9283909 | 4.5191527 | 5.7132795 | 1.1941268 | 1.1941268 |
| 1977 | 0 | 0 | 0 | 0 | 2.7516411 | 2.7516411 | 4.7630172 | 6.5309098 | 1.7679736 | 1.7679736 |
| 1978 | 0 | 0 | 0 | 0 | 3.5949619 | 3.5949619 | 5.2086183 | 6.8200209 | 1.6114026 | 1.6114026 |
| 1979 | 0 | 0 | 0 | 0 | 2.4747752 | 2.4747752 | 4.9524184 | 7.0844849 | 2.1420665 | 2.1420665 |
| 1980 | 0 | 0 | 0 | 0 | 2.9737588 | 2.9737588 | 4.5186576 | 5.8810391 | 1.3623815 | 1.3623815 |
| 1981 | 0 | 0 | 0 | 0 | 2.6488168 | 2.6488168 | 4.3834851 | 6.5451818 | 2.0706967 | 2.0706967 |
| 1982 | 0 | 0 | 0 | 0 | 10.0222589 | 10.0222589 | 5.6383622 | 7.4005197 | 1.7621575 | 1.7621575 |
| 1983 | 0 | 0 | 0 | 0 | 1.0240490 | 1.0240490 | 0.8686401 | 1.7143947 | 0.8457546 | 0.8457546 |
| 1984 | 0 | 0 | 0 | 0 | 1.6496750 | 1.6496750 | 2.7674018 | 3.9368186 | 1.1694168 | 1.1694168 |
| 1985 | 0 | 0 | 0 | 0 | 2.5224065 | 2.5224065 | 3.6942206 | 5.2987621 | 1.6045415 | 1.6045415 |
| 1986 | 0 | 0 | 0 | 0 | 4.4049446 | 4.4049446 | 7.2799222 | 10.5919299 | 3.3120077 | 3.3120077 |
| 1987 | 0 | 0 | 0 | 0 | 3.5386715 | 3.5386715 | 6.4837861 | 9.2276309 | 2.7438448 | 2.7438448 |
| 1988 | 1.1782643 | 1.1782643 | 0 | 1.1782643 | 4.4547478 | 5.6330121 | 6.1750026 | 8.8623075 | 2.6873049 | 2.6873049 |
| 1989 | 1.2715449 | 1.2715449 | 2.5423866 | 3.8139315 | 4.2807103 | 5.5522552 | 8.1617218 | 11.6840191 | 3.5222973 | 3.5222973 |
| 1990 | 2.0026083 | 2.0026083 | 4.2324041 | 6.2350124 | 5.8753602 | 7.8779685 | 11.7200790 | 15.8516543 | 4.1315753 | 4.1315753 |
| 1991 | 1.2486830 | 1.2486830 | 2.6246433 | 3.8733263 | 3.8057971 | 5.0544801 | 7.5402615 | 11.2354100 | 3.6951485 | 3.6951485 |
| 1992 | 0.7094386 | 0.7094386 | 1.4175705 | 2.1270091 | 2.3509123 | 3.0603509 | 4.0600958 | 6.3925273 | 2.3324315 | 2.3324315 |
| 1993 | -0.3464574 | -0.3464574 | -0.6048649 | -0.9513223 | -1.0200530 | -1.3665104 | -1.4929934 | -1.2571378 | 0.2358556 | 0.2358556 |
| 1994 | 1.4600287 | 1.4600287 | 2.6570107 | 4.1170394 | 4.2975560 | 5.7575847 | 7.9510779 | 11.2405895 | 3.2895116 | 3.2895116 |
| 1995 | 0.7544766 | 0.7544766 | 1.2974265 | 2.0519031 | 2.2753763 | 3.0298529 | 3.2312761 | 5.2610469 | 2.0297708 | 2.0297708 |
| 1996 | 1.6427835 | 1.6427835 | 2.7704025 | 4.4131860 | 4.7993051 | 6.4420886 | 8.0186492 | 11.3633990 | 3.3447498 | 3.3447498 |
| 1997 | 1.7801484 | 1.7801484 | 3.0246843 | 4.8048327 | 5.0575904 | 6.8377388 | 9.6521246 | 12.6148371 | 2.9627125 | 2.9627125 |
| 1998 | -0.3253238 | -0.3253238 | -0.5570754 | -0.8823992 | -0.9104311 | -1.2357549 | -1.8866894 | -1.7684350 | 0.1182544 | 0.1182544 |
| 1999 | 0.7843563 | 0.7843563 | 1.2927037 | 2.0770600 | 2.1913971 | 2.9757534 | 3.9861234 | 6.3557474 | 2.3696240 | 2.3696240 |
| 2000 | 1.3573833 | 1.3573833 | 1.9219777 | 3.2793610 | 2.9576846 | 4.3150679 | 6.1750639 | 8.4312104 | 2.2561465 | 2.2561465 |
| 2001 | 8.2055316 | 8.2055316 | 12.6732715 | 20.8789031 | 22.9041445 | 31.1096761 | 42.6660196 | 55.5283905 | 12.8623709 | 12.8623709 |
| 2002 | 4.1919283 | 4.1919283 | 5.3026984 | 9.4946267 | 8.9411156 | 13.1330439 | 18.1196211 | 24.1930110 | 6.0733899 | 6.0733899 |
| 2003 | 4.3517194 | 4.3517194 | 7.0881976 | 11.4399170 | 12.7995247 | 17.1512441 | 19.2844800 | 26.0063200 | 6.7218400 | 6.7218400 |
| 2004 | 4.9058223 | 4.9058223 | 6.4041451 | 11.3099674 | 12.5865996 | 17.4924219 | 19.8191726 | 27.0695827 | 7.2504101 | 7.2504101 |
| 2005 | 6.2493750 | 6.2493750 | 7.6785647 | 13.9259397 | 18.5603496 | 24.8097246 | 25.8644931 | 33.9497845 | 8.0852914 | 8.0852914 |
| 2006 | 5.2558178 | 5.2558178 | 5.9836926 | 11.2395104 | 17.8568766 | 23.1126944 | 22.2459274 | 28.8337549 | 6.5878275 | 6.5878275 |
| 2007 | 7.6216654 | 7.6216654 | 8.0293121 | 15.6509775 | 22.5032473 | 30.1249127 | 31.2279501 | 40.2953738 | 9.0674237 | 9.0674237 |
| 2008 | 7.4069805 | 7.4069805 | 9.5218106 | 16.9287911 | 21.1605138 | 28.5674943 | 27.4806065 | 39.2815114 | 11.8009049 | 11.8009049 |
| 2009 | 5.7262188 | 5.7262188 | 6.8502585 | 12.5764773 | 16.2772023 | 22.0034211 | 23.2876790 | 29.2945217 | 6.0068427 | 6.0068427 |
| 2010 | 19.5126032 | 19.5126032 | 29.5060965 | 49.0186997 | 75.8891788 | 95.4017820 | 34.4854783 | 48.1466882 | 13.6612099 | 13.6612099 |
| 2011 | 18.2433647 | 18.2433647 | 50.8174102 | 69.0607749 | 58.4211505 | 76.6645152 | 55.5439989 | 64.7500245 | 9.2060256 | 9.2060256 |
| 2012 | 14.9857902 | 14.9857902 | 41.678839 | 56.6626741 | 47.9131898 | 62.8989800 | 47.0432952 | 57.6841771 | 10.6408819 | 10.6408819 |
| 2013 | 7.1585078 | 7.1585078 | 20.2286145 | 27.3871223 | 20.3003426 | 27.4588504 | 31.2231724 | 40.1540851 | 8.9309127 | 8.9309127 |
| 2014 | 7.2127239 | 7.2127239 | 20.2285616 | 27.4458355 | 20.3003426 | 27.5176165 | 31.2231669 | 41.2187562 | 9.9955893 | 9.9955893 |
| 2015 | 7.7992894 | 7.7992894 | 20.2286040 | 28.0278934 | 22.7076128 | 30.5069022 | 31.2231686 | 40.6777933 | 9.4546247 | 9.4546247 |
| 2016 | 7.7992894 | 7.7992894 | 20.2286040 | 28.0278934 | 22.7076128 | 30.5069022 | 31.2231686 | 40.7889072 | 9.5657386 | 9.5657386 |
| 2017 | 7.7992894 | 7.7992894 | 20.2286040 | 28.0278934 | 22.7076128 | 30.5069022 | 31.2231686 | 40.2098412 | 8.9866726 | 8.9866726 |
| 2018 | 7.7992894 | 7.7992894 | 20.2286040 | 28.0278934 | 22.7076128 | 30.5069022 | 31.2231686 | 41.6609715 | 10.4378029 | 10.4378029 |
| 2019 | 7.7992894 | 7.7992894 | 20.2286040 | 28.0278934 | 22.7076128 | 30.5069022 | 31.2231686 | 40.7701494 | 9.5469808 | 9.5469808 |
| 2020 | 7.7992894 | 7.7992894 | 20.2286040 | 28.0278934 | 22.7076128 | 30.5069022 | 31.2231686 | 40.5604422 | 9.3372736 | 9.3372736 |
| 2021 | 7.7997579 | 7.7997579 | 20.2286040 | 28.0283619 | 22.7112987 | 30.5110566 | 31.2231686 | 40.8734513 | 9.6502827 | 9.6502827 |
| 2022 | 7.7997579 | 7.7997579 | 20.2286040 | 28.0283619 | 22.7112987 | 30.5110566 | 31.2231686 | 40.7635709 | 9.5404023 | 9.5404023 |
| 2023 | 7.7997579 | 7.7997579 | 20.2286040 | 28.0283619 | 22.7112987 | 30.5110566 | 31.2231686 | 41.0313362 | 9.8081676 | 9.8081676 |
| 2024 | 7.7997579 | 7.7997579 | 20.2286040 | 28.0283619 | 22.7112987 | 30.5110566 | 31.2231686 | 40.4656789 | 9.2425103 | 9.2425103 |
| 2025 | 7.7997579 | 7.7997579 | 20.2286040 | 28.0283619 | 22.7112987 | 30.5110566 | 31.2231686 | 40.9519133 | 9.7287447 | 9.7287447 |
| 2026 | 7.7997579 | 7.7997579 | 20.2286040 | 28.0283619 | 22.7112987 | 30.5110566 | 31.2231686 | 41.7926950 | 10.5695264 | 10.5695264 |
| 2027 | 7.7997579 | 7.7997579 | 20.2286040 | 28.0283619 | 22.7112987 | 30.5110566 | 31.2231686 | 40.6015272 | 9.3783586 | 9.3783586 |
| 2028 | 7.7997579 | 7.7997579 | 20.2286040 | 28.0283619 | 22.7112987 | 30.5110566 | 31.2231686 | 41.2026460 | 9.9794774 | 9.9794774 |
| 2029 | 7.7997579 | 7.7997579 | 20.2286040 | 28.0283619 | 22.7112987 | 30.5110566 | 31.2231686 | 40.5007123 | 9.2775437 | 9.2775437 |
| 2030 | 7.7997579 | 7.7997579 | 20.2286040 | 28.0283619 | 22.7112987 | 30.5110566 | 31.2231686 | 40.7676559 | 9.5444873 | 9.5444873 |
| 2031 | 7.7997579 | 7.7997579 | 20.2286040 | 28.0283619 | 22.7112987 | 30.5110566 | 31.2231686 | 41.3689511 | 10.1457825 | 10.1457825 |
| 2032 | 7.7997579 | 7.7997579 | 20.2286040 | 28.0283619 | 22.7112987 | 30.5110566 | 31.2231686 | 40.5816719 | 9.3585033 | 9.3585033 |
| 2033 | 7.7997579 | 7.7997579 | 20.2286040 | 28.0283619 | 22.7112987 | 30.5110566 | 31.2231686 | 41.5170224 | 10.2938538 | 10.2938538 |
| 2034 | 7.7997579 | 7.7997579 | 20.2286040 | 28.0283619 | 22.7112987 | 30.5110566 | 31.2231686 | 40.7654996 | 9.5423310 | 9.5423310 |
| 2035 | 7.7997579 | 7.7997579 | 20.2286040 | 28.0283619 | 22.7112987 | 30.5110566 | 31.2231686 | 39.6091879 | 8.3860193 | 8.3860193 |

(a) For the period 1968 through 1987, rates are for an interim facility.

(b) The relatively minor costs of Del Valle Pumping Plant have been combined with those of South Bay Pumping Plant to simplify the allocation procedure.

TABLE B-17. Unit Variable OMP&R Component of Transportation Charge

| Calendar Year | CALIFORNIA AQUEDUCT (continued) | | | | | | | | | | Sheet 2 of 5 |
|----------------------|--|-------------------------|---|-------------------------|---------------------------------------|-------------------------|--|-------------------------|---|-------------------------|--------------|
| | Reach 4 Dos Amigos Pumping Plant | | Reach 14A Buena Vista Pumping Plant | | Reach 15A Teerink Pumping Plant | | Reach 16A Chrisman Pumping Plant | | Reach 17E Edmonston Pumping Plant | | |
| | Unit Rate | Cumulative Unit Rate | Unit Rate | Cumulative Unit Rate | Unit Rate | Cumulative Unit Rate | Unit Rate | Cumulative Unit Rate | Unit Rate | Cumulative Unit Rate | |
| | [11] | [12] | [13] | [14] | [15] | [16] | [17] | [18] | [19] | [20] | |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 1968 | 1.0732031 | 2.6167353 | | | 0 | 0 | 0 | 0 | 0 | 0 | |
| 1969 | 0.7028165 | 1.8095316 | | | 0 | 0 | 0 | 0 | 0 | 0 | |
| 1970 | 0.7813430 | 1.7278779 | 0.3333333 | 2.0612112 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 1971 | 0.4125312 | 1.2933749 | 1.1407617 | 2.4341366 | 0.7218469 | 3.1559835 | 0 | 0 | 0 | 0 | |
| 1972 | 0.5662758 | 1.4693754 | 0.8894941 | 2.3588695 | 0.8040021 | 3.1628716 | 1.8113853 | 4.9742569 | 7.3206022 | 12.2948591 | |
| 1973 | 0.5996892 | 1.5383283 | 0.8469026 | 2.3852309 | 1.0302066 | 3.4154375 | 1.8458304 | 5.2612679 | 7.4512435 | 12.7125114 | |
| 1974 | 0.6587934 | 2.8008599 | 0.8122890 | 2.2832190 | 0.9665911 | 3.2498101 | 1.7739395 | 5.0237496 | 6.9004732 | 11.9242228 | |
| 1975 | 0.4606980 | 1.5569000 | 0.7554447 | 2.3123447 | 0.8894108 | 3.2017555 | 1.8682537 | 5.0700092 | 6.9962702 | 12.0662794 | |
| 1976 | 0.5163828 | 1.7105096 | 0.9081491 | 2.6186587 | 0.9640628 | 3.5827215 | 2.1499640 | 5.7326855 | 7.9384515 | 13.6711370 | |
| 1977 | 0.6138931 | 2.3818667 | 0.9835371 | 3.3654038 | 1.2303967 | 4.5958005 | 2.7357728 | 7.3315733 | 9.9990004 | 17.3305737 | |
| 1978 | 0.4545898 | 2.0659924 | 0.9044582 | 2.9704506 | 0.9762058 | 3.9466564 | 1.8872449 | 5.8339013 | 7.0810192 | 12.9149205 | |
| 1979 | 0.6587934 | 2.8008599 | 1.0519199 | 3.8527798 | 1.1976258 | 5.0504056 | 2.6012890 | 7.6516946 | 9.6345625 | 17.2862571 | |
| 1980 | 0.8021465 | 2.1645280 | 1.3516057 | 3.5161337 | 1.5041463 | 5.0202800 | 3.1923433 | 8.2126233 | 10.9860288 | 19.1986521 | |
| 1981 | 1.0923907 | 3.1630874 | 1.2409168 | 4.4040042 | 1.3219771 | 5.7259813 | 2.9592932 | 8.6852745 | 9.9649551 | 18.6502296 | |
| 1982 | 0.8326785 | 2.5948360 | 1.2041660 | 3.7990020 | 1.3723736 | 5.1713756 | 2.8986491 | 8.0700247 | 10.2096358 | 18.2796605 | |
| 1983 | 0.3647859 | 1.2105405 | 0.7590265 | 1.9695077 | 0.8857383 | 2.8553053 | 1.7623405 | 4.6176458 | 5.5086367 | 10.1262825 | |
| 1984 | 0.6581523 | 1.8275691 | 1.0533611 | 2.8809302 | 1.2188270 | 4.0997572 | 2.5407768 | 6.6405340 | 8.2344665 | 14.8750005 | |
| 1985 | 0.8726163 | 2.4771578 | 1.4204831 | 3.8976409 | 1.6516291 | 5.5492700 | 3.4695783 | 9.0188483 | 11.8181234 | 20.8369717 | |
| 1986 | 1.3996542 | 4.7116619 | 2.3713282 | 7.0829901 | 2.7567970 | 9.8397871 | 5.9534613 | 15.7932484 | 20.6010240 | 36.3942724 | |
| 1987 | 1.2912643 | 4.0351091 | 2.2344385 | 6.2695476 | 2.5459999 | 8.8155475 | 5.3141190 | 14.1296665 | 17.7628277 | 31.8924942 | |
| 1988 | 1.1947837 | 3.8820886 | 2.1129991 | 5.9950877 | 2.4017135 | 8.3968012 | 5.0055748 | 13.4023760 | 16.6001692 | 30.0025452 | |
| 1989 | 1.4935226 | 5.0158199 | 2.6947446 | 7.7105645 | 3.0084211 | 10.7189856 | 6.5499538 | 17.2689394 | 22.1795336 | 39.4484730 | |
| 1990 | 1.8962463 | 6.0278216 | 3.3080372 | 9.3358588 | 3.7483036 | 13.0841624 | 8.6832678 | 21.7674302 | 31.0405219 | 52.8079521 | |
| 1991 | 1.0437991 | 4.7389476 | 2.1132495 | 6.8521971 | 2.4154810 | 9.2676781 | 5.6823745 | 14.9500526 | 20.4744695 | 35.4245221 | |
| 1992 | 0.9002103 | 3.2326418 | 1.4836761 | 4.7163179 | 1.7077297 | 6.4240476 | 3.5445788 | 9.9868264 | 12.0459599 | 22.0145863 | |
| 1993 | 0.1605206 | 0.3963762 | -0.1405164 | 0.2558598 | -0.1312944 | 0.1245654 | -0.7754796 | -0.6509142 | -3.5829899 | -4.2338131 | |
| 1994 | 1.4208578 | 4.7103694 | 2.5100856 | 7.2204550 | 2.8029168 | 10.0233718 | 6.0772944 | 16.1006662 | 21.5000984 | 37.6007646 | |
| 1995 | 0.7974861 | 2.8272569 | 1.3474564 | 4.1747133 | 1.4945529 | 5.6692662 | 3.1250716 | 8.7943378 | 10.7461772 | 19.5405150 | |
| 1996 | 1.6726383 | 5.0173881 | 2.5952092 | 7.6125973 | 2.8425227 | 10.4551200 | 6.3087407 | 16.7638607 | 22.6420778 | 39.4059385 | |
| 1997 | 1.2769880 | 4.2397005 | 2.5012144 | 6.7409149 | 2.6893394 | 9.4302543 | 6.2890095 | 15.7192638 | 23.0714697 | 38.7907335 | |
| 1998 | -0.2195574 | -0.1013030 | -0.4232465 | -0.5245495 | -0.4504610 | -0.9750105 | -1.0585256 | -2.0335361 | -3.8077856 | -5.8413217 | |
| 1999 | 0.8412976 | 3.2109216 | 1.4071463 | 4.6180679 | 1.2831855 | 5.9012534 | 3.4289262 | 9.3301796 | 13.6776471 | 23.0078267 | |
| 2000 | 0.9040710 | 3.1602175 | 1.5878038 | 4.7480213 | 1.7452988 | 6.4933201 | 4.1143502 | 10.6076703 | 15.0640075 | 25.6716778 | |
| 2001 | 6.1086859 | 18.9710568 | 11.2559562 | 30.2270130 | 12.3418092 | 42.5688222 | 28.5247253 | 71.0935475 | 106.7621717 | 177.8557192 | |
| 2002 | 2.6220833 | 8.6954732 | 4.5962317 | 13.2917049 | 5.0138001 | 18.3055050 | 11.6005877 | 29.9060927 | 43.1042849 | 73.0103776 | |
| 2003 | 3.1166657 | 9.8385057 | 5.5794880 | 15.4179937 | 6.0783311 | 21.4963248 | 14.1371533 | 35.6334781 | 56.0809040 | 88.1943685 | |
| 2004 | 3.3197445 | 10.5701546 | 5.8461113 | 16.4162659 | 6.3502364 | 22.7665023 | 14.7925812 | 37.5590835 | 54.9937391 | 92.5528226 | |
| 2005 | 3.8183053 | 11.9035967 | 6.8527860 | 18.7563827 | 7.4284805 | 26.1848632 | 17.2725190 | 43.4573822 | 62.2202022 | 105.6775844 | |
| 2006 | 3.0036636 | 9.5914911 | 5.5986296 | 15.1901207 | 6.0264134 | 21.2165341 | 14.0878492 | 35.3043833 | 48.0230474 | 83.3274307 | |
| 2007 | 4.4405312 | 13.5079549 | 7.9563457 | 21.4643006 | 8.6143110 | 30.0786116 | 19.9737755 | 50.0523871 | 69.4257050 | 119.4780921 | |
| 2008 | 4.5153528 | 16.3162577 | 8.5013756 | 24.8176333 | 9.9188295 | 34.7364628 | 20.6039233 | 55.3043861 | 72.7853997 | 128.1257858 | |
| 2009 | 3.4491834 | 9.4560261 | 6.2595476 | 15.7155737 | 6.9020998 | 22.6176735 | 15.2783211 | 37.8959946 | 55.1890045 | 93.0849991 | |
| 2010 | 5.0169905 | 18.6782004 | 8.4423021 | 27.1205025 | 10.2337817 | 37.3542842 | 22.1474564 | 59.5017406 | 77.1277688 | 136.6295094 | |
| 2011 | 5.1244545 | 14.3304801 | 9.4296590 | 23.7601391 | 11.6077532 | 35.3678923 | 25.2256336 | 60.5935259 | 88.0616727 | 148.6551986 | |
| 2012 | 4.1860018 | 14.8268837 | 7.8830166 | 22.7099003 | 9.7160697 | 32.4259700 | 21.1272615 | 53.5532315 | 73.7226195 | 127.2758510 | |
| 2013 | 4.8515330 | 13.7824457 | 8.2920532 | 22.0744989 | 8.5067682 | 30.5812671 | 20.3438674 | 50.9251345 | 76.9519745 | 127.8771090 | |
| 2014 | 5.0742649 | 15.0698542 | 8.8489307 | 23.9187849 | 9.1131141 | 33.0318990 | 21.8334744 | 54.8653734 | 82.6691871 | 137.5345605 | |
| 2015 | 4.9547051 | 14.4093298 | 8.5598745 | 22.9692043 | 8.8024235 | 31.7716278 | 21.0776523 | 52.8492801 | 79.7820550 | 132.6313351 | |
| 2016 | 5.0744437 | 14.6401823 | 8.8476376 | 23.4878199 | 9.1126468 | 32.6004667 | 21.8359594 | 54.4364261 | 82.6846504 | 137.1210765 | |
| 2017 | 4.8566904 | 13.8433630 | 8.3250085 | 22.1683715 | 8.5494143 | 30.7177858 | 20.4593562 | 51.1771420 | 77.4156842 | 128.5928262 | |
| 2018 | 5.1731440 | 15.6109469 | 9.0872761 | 24.9882230 | 9.3714909 | 34.0697139 | 22.4691697 | 56.5388836 | 85.1094917 | 141.6483753 | |
| 2019 | 5.0067422 | 14.5537230 | 8.6845859 | 23.2383089 | 8.9370102 | 32.1753191 | 21.4070405 | 53.5823596 | 81.0435539 | 134.6259135 | |
| 2020 | 5.0622574 | 14.3995310 | 8.8180899 | 23.2176209 | 9.0808348 | 32.2984557 | 21.7583730 | 54.0568287 | 82.3880041 | 136.4448328 | |
| 2021 | 5.0560745 | 14.7063572 | 8.8032307 | 23.5095879 | 9.0648371 | 32.5744250 | 21.7193327 | 54.2937577 | 82.2386449 | 136.5324026 | |
| 2022 | 5.0712167 | 14.6116190 | 8.8394366 | 23.4510556 | 9.1038761 | 32.5549317 | 21.8147114 | 54.3696431 | 82.6036979 | 136.9733410 | |
| 2023 | 5.1018666 | 14.9100342 | 8.9131487 | 23.8231829 | 9.1834028 | 33.0065857 | 22.0091747 | 55.0157604 | 83.3481643 | 138.3639247 | |
| 2024 | 5.0603248 | 14.3028351 | 8.8129538 | 23.1157889 | 9.0753163 | 32.1911052 | 21.7449950 | 53.9361002 | 82.3369080 | 136.2730082 | |
| 2025 | 5.0872301 | 14.8159748 | 8.8775631 | 23.6935379 | 9.1449955 | 32.8385334 | 21.9152528 | 54.7537862 | 82.9885852 | 137.7423714 | |
| 2026 | 5.0475715 | 15.6170979 | 8.7821401 | 24.3992380 | 9.0421305 | 33.4413685 | 21.6639072 | 55.1052757 | 82.0266299 | 137.1319056 | |
| 2027 | 5.0867298 | 14.4650884 | 8.8771622 | 23.3422506 | 9.1445477 | 32.4867983 | 21.9141277 | 54.4009260 | 82.9842062 | 137.3851322 | |
| 2028 | 5.0520025 | 15.0314799 | 8.7936545 | 23.8251344 | 9.0545064 | 32.8796408 | 21.6940894 | 54.5737302 | 82.1420373 | 136.7157675 | |
| 2029 | 5.0680451 | 14.3455888 | 8.8318449 | 23.1774337 | 9.095669 | | | | | | |

TABLE B-17. Unit Variable OMP&R Component of Transportation Charge

(in dollars per acre-foot)

Sheet 3 of 5

| Calendar Year | CALIFORNIA AQUEDUCT (continued) | | | | | | | |
|------------------|----------------------------------|-------------------------|--|-------------------------|---|-------------------------|---|-------------------------|
| | Reach 18A Alamo Powerplant | | Reach 22B Pearlblossom Pumping Plant | | Reach 23 Mojave Siphon Powerplant | | Reach 26A Devil Canyon Powerplant | |
| | Unit Rate | Cumulative Unit Rate | Unit Rate | Cumulative Unit Rate | Unit Rate | Cumulative Unit Rate | Unit Rate | Cumulative Unit Rate |
| | [21] | [22] | [23] | [24] | [25] | [26] | [27] | [28] |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1968 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1969 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1970 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1972 | 0 | 0 | 1.9331104 | 14.2279695 | 0 | 0 | -2.3717647 | 11.8562048 |
| 1973 | 0 | 0 | 3.8751940 | 16.5877054 | 0 | 0 | -8.9027252 | 7.6849802 |
| 1974 | 0 | 0 | 3.1602116 | 15.0844344 | 0 | 0 | -5.3440968 | 9.7403376 |
| 1975 | 0 | 0 | 3.0210558 | 15.0873352 | 0 | 0 | -5.7803309 | 9.3070043 |
| 1976 | 0 | 0 | 3.7579009 | 17.4290379 | 0 | 0 | -6.6439666 | 10.7850713 |
| 1977 | 0 | 0 | 3.0796474 | 20.4102211 | 0 | 0 | -12.0911833 | 8.3190378 |
| 1978 | 0 | 0 | 4.0233030 | 16.9382235 | 0 | 0 | -8.2569506 | 8.6812729 |
| 1979 | 0 | 0 | 5.0776468 | 22.3639039 | 0 | 0 | -9.7140035 | 12.6499004 |
| 1980 | 0 | 0 | 4.3918283 | 23.5904804 | 0 | 0 | -8.3797007 | 15.2107797 |
| 1981 | 0 | 0 | 3.9973528 | 22.6475824 | 0 | 0 | -6.7528590 | 15.8947234 |
| 1982 | 0 | 0 | 3.6829998 | 21.9626603 | 0 | 0 | -6.9238898 | 15.0387705 |
| 1983 | 0 | 0 | 1.7205305 | 11.8468130 | 0 | 0 | -23.7923457 | -11.9455327 |
| 1984 | 0 | 0 | 2.4763871 | 17.3513876 | 0 | 0 | -29.2940447 | -11.9428571 |
| 1985 | 0 | 0 | 3.4967556 | 24.3337273 | 0 | 0 | -30.7672356 | -6.4335083 |
| 1986 | -2.3583180 | 34.0359544 | 5.9864597 | 40.0224141 | 0 | 0 | -29.2499580 | 10.7724561 |
| 1987 | -2.5482255 | 29.3442687 | 5.0535029 | 34.3977716 | 0 | 0 | -29.7006534 | 4.6971182 |
| 1988 | -1.3847067 | 28.6178385 | 4.7392460 | 33.3570845 | 0 | 0 | -29.0334518 | 4.3236327 |
| 1989 | -1.1019487 | 38.3465243 | 6.4066114 | 44.7531357 | 0 | 0 | -28.3706997 | 16.3824360 |
| 1990 | -1.0673268 | 51.7406253 | 8.9787944 | 60.7194197 | 0 | 0 | -28.8797266 | 31.8396931 |
| 1991 | -1.5206590 | 33.9038631 | 6.0785417 | 39.9824048 | 0 | 0 | -30.3294563 | 9.6529485 |
| 1992 | -2.6080003 | 19.4065860 | 3.6219501 | 23.0285361 | 0 | 0 | -29.7938993 | -6.7653632 |
| 1993 | -0.1885524 | -4.4223655 | -1.0192774 | -5.4416429 | 0 | 0 | -30.6629489 | -36.1045639 |
| 1994 | -0.1279266 | 37.4728380 | 6.4513573 | 43.9241953 | 0 | 0 | -30.4781656 | 13.4460297 |
| 1995 | -3.4425314 | 16.0979836 | 3.3643070 | 19.4622906 | 0 | 0 | -30.3517624 | -10.8894718 |
| 1996 | -5.9839345 | 33.4220040 | 6.6794995 | 40.1015035 | -2.3423415 | 37.7591620 | -29.5900574 | 8.1691046 |
| 1997 | -4.7847800 | 34.0059735 | 6.8397922 | 40.8457657 | -3.8632009 | 36.9825648 | -30.6066647 | 6.3759001 |
| 1998 | -5.0614104 | -10.9027321 | -1.3239652 | -12.2266973 | -3.7700558 | -15.9967531 | -30.4293072 | -46.4260603 |
| 1999 | -4.8990186 | 18.1088081 | 3.7378677 | 21.8466758 | -5.1563836 | 16.6902922 | -30.2385322 | -13.5482400 |
| 2000 | -5.3488706 | 20.3228072 | 4.4582741 | 24.7810813 | -5.1804371 | 19.6006442 | -30.2852311 | -10.6845869 |
| 2001 | -4.6384802 | 173.2172390 | 29.9021773 | 203.1194163 | -5.7604953 | 197.3589210 | -30.9018397 | 166.4570813 |
| 2002 | -5.4531282 | 67.5572494 | 12.9377428 | 80.4949922 | -6.3905250 | 74.1044672 | -30.1661590 | 43.9383082 |
| 2003 | -3.3091872 | 84.8851813 | 15.3961179 | 100.2812992 | -7.1656891 | 93.1156101 | -30.3892607 | 62.7263494 |
| 2004 | -5.5670313 | 86.9857913 | 16.1493631 | 103.1351544 | -7.4151857 | 95.7199687 | -30.2389380 | 65.4810307 |
| 2005 | -5.5017080 | 100.1758764 | 17.8811480 | 118.0570244 | -6.6110924 | 111.4459320 | -30.2939296 | 81.1520024 |
| 2006 | -3.1371727 | 80.1902580 | 13.8635964 | 94.0538544 | -5.4945929 | 88.5592615 | -29.8005787 | 58.7586828 |
| 2007 | -2.7809944 | 116.6970977 | 20.3018280 | 136.9989257 | -6.1785168 | 130.8204089 | -30.0961198 | 100.7242891 |
| 2008 | -5.4028716 | 122.7228142 | 20.5168484 | 143.2397626 | -6.0198040 | 137.2199586 | -30.7631237 | 106.4568349 |
| 2009 | -6.3445967 | 86.7404024 | 18.5492907 | 105.2896931 | -5.4877422 | 99.8019509 | -33.3163093 | 66.4856416 |
| 2010 | -6.1087505 | 130.5207589 | 24.6066066 | 155.1273655 | -8.3766699 | 146.7506956 | -26.4604240 | 120.2902716 |
| 2011 | -5.8309233 | 142.8242753 | 28.9205757 | 171.7448510 | -10.4952778 | 161.2495732 | -30.1883398 | 131.0612334 |
| 2012 | -5.3654258 | 121.9104252 | 24.2326140 | 146.1430392 | -9.1465381 | 136.9965011 | -26.3596538 | 110.6368473 |
| 2013 | -5.4021564 | 122.4749526 | 24.3716613 | 146.8466139 | -7.8237493 | 139.0228646 | -27.6855477 | 111.3573169 |
| 2014 | -5.6124340 | 131.9221265 | 25.5454998 | 157.4676263 | -8.2616505 | 149.2059758 | -29.4539609 | 119.7520149 |
| 2015 | -5.2371530 | 127.3941821 | 25.0142548 | 152.4084369 | -8.2957545 | 144.1126842 | -28.4535270 | 115.6591554 |
| 2016 | -5.4284432 | 131.6926333 | 26.1121983 | 157.8048316 | -8.9744067 | 148.8304249 | -28.7798511 | 120.0505738 |
| 2017 | -5.2609997 | 123.3318265 | 25.0601446 | 148.3919711 | -8.7294073 | 139.6625638 | -28.4526189 | 111.2099449 |
| 2018 | -5.5404487 | 136.1079266 | 26.7176320 | 162.8255586 | -9.0940836 | 153.7314750 | -29.2748872 | 124.4565878 |
| 2019 | -5.2417277 | 129.3841858 | 25.1187553 | 154.5029411 | -8.5137433 | 145.9891978 | -28.4512915 | 117.5379063 |
| 2020 | -5.3406562 | 131.1041766 | 25.7457630 | 156.8499396 | -8.7871292 | 148.0628104 | -29.1921095 | 118.8707009 |
| 2021 | -5.3753578 | 131.1570448 | 25.7199356 | 156.8769804 | -8.9048177 | 147.9721627 | -28.7253973 | 119.2467654 |
| 2022 | -5.3728282 | 131.6005128 | 25.7697492 | 157.3702620 | -8.7706831 | 148.5905789 | -28.4762895 | 120.1232894 |
| 2023 | -5.4529887 | 132.9109360 | 26.0801861 | 158.9911221 | -9.0704639 | 149.9206582 | -28.9561986 | 120.9644596 |
| 2024 | -5.3159141 | 130.9570941 | 25.3216441 | 156.2787382 | -8.5488192 | 147.7299190 | -28.8186928 | 118.9112262 |
| 2025 | -5.4400951 | 132.3022763 | 25.9003180 | 158.2025943 | -8.6849276 | 149.5176667 | -28.6654947 | 120.8521720 |
| 2026 | -5.3398042 | 131.7921014 | 25.4517938 | 157.2438952 | -8.4278558 | 148.8160394 | -28.9233960 | 119.8926434 |
| 2027 | -5.4096391 | 131.9754931 | 25.8284323 | 157.8039254 | -8.8078502 | 148.9960752 | -28.7812512 | 120.2148240 |
| 2028 | -5.3735111 | 131.3422564 | 25.6292990 | 156.9715554 | -8.4889027 | 148.4826527 | -28.9880734 | 119.4945793 |
| 2029 | -5.3884652 | 131.2057921 | 25.7538614 | 156.9596535 | -8.7341365 | 148.2255170 | -28.6960282 | 119.5294888 |
| 2030 | -5.3286540 | 130.2248968 | 25.5296562 | 155.7545530 | -8.6807716 | 147.0737814 | -28.7658417 | 118.3079397 |
| 2031 | -5.4876020 | 136.3221309 | 26.3067614 | 162.6288923 | -8.7354297 | 153.8934626 | -28.8898454 | 125.0036172 |
| 2032 | -5.2046977 | 127.6706329 | 24.8730908 | 152.5437237 | -8.1332657 | 144.4104580 | -28.3717938 | 116.0386642 |
| 2033 | -5.5306085 | 136.4500372 | 26.5023733 | 162.9524105 | -8.7863777 | 154.1660328 | -29.4229983 | 124.7430345 |
| 2034 | -5.2832406 | 128.4339694 | 25.1381282 | 153.5720976 | -8.4164449 | 145.1556527 | -28.2753223 | 116.8803304 |
| 2035 | -5.5693619 | 138.3690224 | 26.7090613 | 165.0780837 | -8.7085079 | 156.3695758 | -29.6450752 | 126.7245006 |

TABLE B-17. Unit Variable OMP&R Component of Transportation Charge

(in dollars per acre-foot)

Sheet 4 of 5

| Calendar Year | CALIFORNIA AQUEDUCT (continued) | | | | | | | |
|---------------|--|-------------------------|--|-------------------------|--|-------------------------|-----------------------------------|-------------------------|
| | Reach 2B (EBX) Greenspot Pumping Plant | | Reach 3A (EBX) Crafton Hills Pumping Plant | | Reach 4B (EBX) Cherry Valley Pumping Plant | | Reach 29A Oso Pumping Plant | |
| | Unit Rate | Cumulative Unit Rate | Unit Rate | Cumulative Unit Rate | Unit Rate | Cumulative Unit Rate | Unit Rate | Cumulative Unit Rate |
| | [29] | [30] | [31] | [32] | [33] | [34] | [35] | [36] |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1968 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1969 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1970 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1972 | 0 | 0 | 0 | 0 | 0 | 0 | 1.1017349 | 13.3965940 |
| 1973 | 0 | 0 | 0 | 0 | 0 | 0 | 0.7905574 | 13.5030688 |
| 1974 | 0 | 0 | 0 | 0 | 0 | 0 | 0.7530214 | 12.6772442 |
| 1975 | 0 | 0 | 0 | 0 | 0 | 0 | 0.8405850 | 12.9068644 |
| 1976 | 0 | 0 | 0 | 0 | 0 | 0 | 0.7771828 | 14.4483198 |
| 1977 | 0 | 0 | 0 | 0 | 0 | 0 | 0.6152458 | 17.9458195 |
| 1978 | 0 | 0 | 0 | 0 | 0 | 0 | 0.5222831 | 13.4372036 |
| 1979 | 0 | 0 | 0 | 0 | 0 | 0 | 0.7045701 | 17.9908272 |
| 1980 | 0 | 0 | 0 | 0 | 0 | 0 | 1.4269064 | 20.6255585 |
| 1981 | 0 | 0 | 0 | 0 | 0 | 0 | 1.5684309 | 20.2186605 |
| 1982 | 0 | 0 | 0 | 0 | 0 | 0 | 1.4942585 | 19.7739190 |
| 1983 | 0 | 0 | 0 | 0 | 0 | 0 | 1.2818887 | 11.4081712 |
| 1984 | 0 | 0 | 0 | 0 | 0 | 0 | 1.7796296 | 16.6546301 |
| 1985 | 0 | 0 | 0 | 0 | 0 | 0 | 2.1683838 | 23.0053555 |
| 1986 | 0 | 0 | 0 | 0 | 0 | 0 | 3.2288411 | 39.6231135 |
| 1987 | 0 | 0 | 0 | 0 | 0 | 0 | 3.1272967 | 35.0197909 |
| 1988 | 0 | 0 | 0 | 0 | 0 | 0 | 2.9878581 | 32.9904033 |
| 1989 | 0 | 0 | 0 | 0 | 0 | 0 | 3.5262089 | 42.9746819 |
| 1990 | 0 | 0 | 0 | 0 | 0 | 0 | 3.6810660 | 56.4890181 |
| 1991 | 0 | 0 | 0 | 0 | 0 | 0 | 2.1853025 | 37.6098246 |
| 1992 | 0 | 0 | 0 | 0 | 0 | 0 | 1.9048343 | 23.9194206 |
| 1993 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1569728 | -4.0768403 |
| 1994 | 0 | 0 | 0 | 0 | 0 | 0 | 3.0638504 | 40.6646150 |
| 1995 | 0 | 0 | 0 | 0 | 0 | 0 | 1.5724835 | 21.1129985 |
| 1996 | 0 | 0 | 0 | 0 | 0 | 0 | 3.1318961 | 42.5378346 |
| 1997 | 0 | 0 | 0 | 0 | 0 | 0 | 2.7928728 | 41.5836063 |
| 1998 | 0 | 0 | 0 | 0 | 0 | 0 | -0.3226129 | -6.1639346 |
| 1999 | 0 | 0 | 0 | 0 | 0 | 0 | 1.8332567 | 24.8410834 |
| 2000 | 0 | 0 | 0 | 0 | 0 | 0 | 1.7683383 | 27.4400161 |
| 2001 | 0 | 0 | 0 | 0 | 0 | 0 | 13.4927370 | 191.3484562 |
| 2002 | 0 | 0 | 0 | 0 | 0 | 0 | 4.8843428 | 77.8947204 |
| 2003 | 0 | 0 | 0 | 0 | 0 | 0 | 6.1226755 | 94.3170440 |
| 2004 | 0 | 0 | 0 | 0 | 0 | 0 | 6.4523495 | 99.0051721 |
| 2005 | 0 | 0 | 0 | 0 | 0 | 0 | 7.3202651 | 112.9978495 |
| 2006 | 0 | 0 | 0 | 0 | 0 | 0 | 5.4058766 | 88.7333073 |
| 2007 | 22.1804545 | 122.9047436 | 29.3762270 | 152.2809706 | 82.0433898 | 234.3243604 | 8.2245231 | 127.7028152 |
| 2008 | 19.0579269 | 125.5147618 | 25.5712107 | 151.0859725 | 10.5355086 | 161.6214811 | 9.0231108 | 137.1488966 |
| 2009 | 15.9293501 | 82.4149917 | 20.8967989 | 103.3117906 | 4.7912803 | 108.1030709 | 5.9837989 | 99.0687980 |
| 2010 | 73.9705002 | 194.2607718 | 92.3145219 | 286.5752937 | 0.0000000 | 286.5752937 | 9.7629803 | 146.3924897 |
| 2011 | 31.4432258 | 162.5044592 | 39.2408602 | 201.7453194 | 0.0000000 | 201.7453194 | 9.5110406 | 158.1662392 |
| 2012 | 30.1456122 | 140.7824595 | 37.6214286 | 178.4038881 | 0.0000000 | 178.4038881 | 7.9082261 | 135.1840771 |
| 2013 | 31.2950000 | 142.6523169 | 39.0559322 | 181.7082491 | 0.0000000 | 181.7082491 | 8.7226773 | 136.5997863 |
| 2014 | 31.2950289 | 151.0470438 | 39.0558960 | 190.1029398 | 0.0000000 | 190.1029398 | 9.7644440 | 147.2990075 |
| 2015 | 31.2950289 | 146.9541843 | 39.0558960 | 186.0100803 | 0.0000000 | 186.0100803 | 9.1962693 | 141.8276044 |
| 2016 | 31.2950289 | 151.3456027 | 39.0558960 | 190.4014987 | 0.0000000 | 190.4014987 | 9.5038617 | 146.6249382 |
| 2017 | 31.2950289 | 142.5049738 | 39.0558960 | 181.5608698 | 0.0000000 | 181.5608698 | 8.5497322 | 137.1425584 |
| 2018 | 31.2950289 | 155.7516167 | 39.0558960 | 194.8075127 | 0.0000000 | 194.8075127 | 9.8927341 | 151.5411094 |
| 2019 | 31.2950289 | 148.8329352 | 39.0558960 | 187.8888312 | 0.0000000 | 187.8888312 | 9.4876101 | 144.1135236 |
| 2020 | 31.2950289 | 150.1657298 | 39.0558960 | 189.2216258 | 0.0000000 | 189.2216258 | 9.5786223 | 146.0234551 |
| 2021 | 31.2950289 | 150.5417943 | 39.0558960 | 189.5976903 | 0.0000000 | 189.5976903 | 9.5498775 | 146.0822801 |
| 2022 | 31.2950289 | 151.4183183 | 39.0558960 | 190.4742143 | 0.0000000 | 190.4742143 | 9.6257432 | 146.5990842 |
| 2023 | 31.2950289 | 152.2594885 | 39.0558960 | 191.3153845 | 0.0000000 | 191.3153845 | 9.6923407 | 148.0562654 |
| 2024 | 31.2950289 | 150.2062551 | 39.0558960 | 189.2621511 | 0.0000000 | 189.2621511 | 9.7492044 | 146.0222126 |
| 2025 | 31.2950289 | 152.1472009 | 39.0558960 | 191.2030969 | 0.0000000 | 191.2030969 | 9.6727444 | 147.4151188 |
| 2026 | 31.2950289 | 151.1876723 | 39.0558960 | 190.2435683 | 0.0000000 | 190.2435683 | 9.6071109 | 146.7390165 |
| 2027 | 31.2950289 | 151.5098529 | 39.0558960 | 190.5657489 | 0.0000000 | 190.5657489 | 9.7025414 | 147.0876736 |
| 2028 | 31.2950289 | 150.7896082 | 39.0558960 | 189.8455042 | 0.0000000 | 189.8455042 | 9.5624708 | 146.2782383 |
| 2029 | 31.2950289 | 150.8245177 | 39.0558960 | 189.8804137 | 0.0000000 | 189.8804137 | 9.6121657 | 146.2064230 |
| 2030 | 31.2950289 | 149.6029686 | 39.0558960 | 188.6588646 | 0.0000000 | 188.6588646 | 9.4766648 | 145.0302156 |
| 2031 | 31.2950289 | 156.2986461 | 39.0558960 | 195.3545421 | 0.0000000 | 195.3545421 | 10.1542081 | 151.9639410 |
| 2032 | 31.2950289 | 147.3336931 | 39.0558960 | 186.3895891 | 0.0000000 | 186.3895891 | 9.3169176 | 142.1922482 |
| 2033 | 31.2950289 | 156.0380634 | 39.0558960 | 195.0939594 | 0.0000000 | 195.0939594 | 10.0705579 | 152.0512036 |
| 2034 | 31.2950289 | 148.1753593 | 39.0558960 | 187.2312553 | 0.0000000 | 187.2312553 | 9.3203245 | 143.0375345 |
| 2035 | 31.2950289 | 158.0195295 | 39.0558960 | 197.0754255 | 0.0000000 | 197.0754255 | 10.7358065 | 154.6741908 |

TABLE B-17. Unit Variable OMP&R Component of Transportation Charge

(in dollars per acre-foot)

Sheet 5 of 5

| Calendar Year | CALIFORNIA AQUEDUCT (continued) | | | | | | | |
|---------------|----------------------------------|-------------------------|------------------------------------|-------------------------|---|-------------------------|---|-------------------------|
| | Reach 29G Warne Powerplant | | Reach 29J Castaic Powerplant | | Reach 31A Las Perillas & Badger Hill Pumping Plants | | Reach 33A Devil's Den, Bluestone, and Polonio Pass Pumping Plants | |
| | Unit Rate | Cumulative Unit Rate | Unit Rate | Cumulative Unit Rate | Unit Rate | Cumulative Unit Rate | Unit Rate | Cumulative Unit Rate |
| | [37] | [38] | [39] | [40] | [41] | [42] | [43] | [44] |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1968 | 0 | 0 | 0 | 0 | 1.5014866 | 4.1182219 | 0 | 0 |
| 1969 | 0 | 0 | 0 | 0 | 1.2624066 | 3.0719382 | 0 | 0 |
| 1970 | 0 | 0 | 0 | 0 | 1.6309699 | 3.3588478 | 0 | 0 |
| 1971 | 0 | 0 | 0 | 0 | 1.4985537 | 2.7919286 | 0 | 0 |
| 1972 | 0 | 0 | -2.9350830 | 10.4615110 | 1.9517720 | 3.4211474 | 0 | 0 |
| 1973 | 0 | 0 | -6.8099448 | 6.6931240 | 1.5374531 | 3.0757814 | 0 | 0 |
| 1974 | 0 | 0 | -7.4013274 | 5.2759168 | 1.5168982 | 2.9878282 | 0 | 0 |
| 1975 | 0 | 0 | -6.5604921 | 6.3463723 | 1.1130304 | 2.6699304 | 0 | 0 |
| 1976 | 0 | 0 | -6.7213324 | 7.7269874 | 1.5685447 | 0.0000000 | 0 | 0 |
| 1977 | 0 | 0 | -30.4985994 | -12.5527799 | 1.7573375 | 3.2790543 | 0 | 0 |
| 1978 | 0 | 0 | -9.0130187 | 4.4241849 | 1.9429506 | 4.1392042 | 0 | 0 |
| 1979 | 0 | 0 | -19.0478097 | -1.0569825 | 1.5600341 | 4.0089430 | 0 | 0 |
| 1980 | 0 | 0 | -20.5438586 | 0.0816999 | 1.5124754 | 4.3608940 | 0 | 0 |
| 1981 | 0 | 0 | -10.0059379 | 10.2127226 | 1.5414199 | 3.6770034 | 0 | 0 |
| 1982 | -2.1714430 | 17.6024760 | -9.5987314 | 8.0037446 | 1.7581649 | 4.7045073 | 0 | 0 |
| 1983 | -8.9130752 | 2.4950960 | -39.8193120 | -37.3242160 | 0.1782765 | 4.3530009 | 0 | 0 |
| 1984 | -15.0246012 | 1.6300289 | -17.3128964 | -15.6826675 | 0.8546712 | 1.3888170 | 0 | 0 |
| 1985 | -14.7115359 | 8.2938196 | -38.9450629 | -30.6512433 | 1.2014351 | 2.6822403 | 0 | 0 |
| 1986 | -14.1893653 | 25.4337482 | -28.1596224 | -2.7258742 | 2.2635886 | 3.6785929 | 0 | 0 |
| 1987 | -14.8696165 | 20.1501744 | -27.0536484 | -6.9034740 | 1.9135072 | 6.9752505 | 0 | 0 |
| 1988 | -14.7032843 | 18.2871190 | -25.6857024 | -7.3985834 | 1.7733386 | 5.9486163 | 0 | 0 |
| 1989 | -14.4231503 | 28.5515316 | -25.3986130 | -3.1529186 | 2.4159040 | 5.6554272 | 0 | 0 |
| 1990 | -14.1850383 | 42.3039798 | -26.0776142 | 16.2263656 | 3.7962150 | 7.4317239 | 0 | 0 |
| 1991 | -14.7118704 | 22.8979542 | -25.0234633 | -2.1255091 | 2.4131016 | 9.8240366 | 0 | 0 |
| 1992 | -14.6199430 | 9.2994776 | -25.1951357 | -15.8956581 | 1.2766372 | 7.1520492 | 0 | 0 |
| 1993 | -10.3386607 | -14.4155010 | -21.1218973 | -35.5373983 | -1.1726172 | 4.5092790 | 0 | 0 |
| 1994 | -14.7696788 | 25.8949362 | -26.7437304 | -0.8487942 | 2.3645104 | -0.7762410 | 7.0748798 | 0 |
| 1995 | -12.2705974 | 8.8424011 | -25.6907993 | -16.8483982 | 2.5750402 | 7.0748798 | 0 | 0 |
| 1996 | -14.8515762 | 27.6862584 | -29.5639188 | -2.1776604 | 2.5837041 | 5.4022971 | 0 | 0 |
| 1997 | -14.9272063 | 26.6564000 | -27.1541858 | -0.4977858 | 2.7029648 | 7.6010922 | 24.4572499 | 31.3999152 |
| 1998 | -8.6695834 | -14.8335180 | -22.2303491 | -37.0638671 | -0.5072304 | 6.9426653 | -4.1828906 | -4.7914240 |
| 1999 | -14.9340263 | 9.9070571 | -27.0443818 | -17.1373247 | 1.3343489 | -0.6085334 | 9.5757906 | 14.1210611 |
| 2000 | -14.1657261 | 13.2742900 | -26.9670096 | -13.6927196 | 1.8660979 | 4.5452705 | 13.8589537 | 18.8852691 |
| 2001 | -16.7349304 | 174.6135258 | -29.2914159 | 145.3221099 | 12.3088319 | 5.0263154 | 93.1086646 | 124.3885539 |
| 2002 | -13.2004543 | 64.6942661 | -23.7780808 | 40.9161853 | 5.4523570 | 31.2798887 | 42.2356453 | 56.3834755 |
| 2003 | -13.9757172 | 80.3413268 | -23.8496317 | 56.4916951 | 6.2983545 | 14.1478302 | 48.5340327 | 64.6708929 |
| 2004 | -14.1574758 | 84.8476963 | -25.2967499 | 59.5509464 | 6.4411290 | 16.1368602 | 52.3954777 | 69.4067613 |
| 2005 | -14.2938796 | 98.7039699 | -24.7472457 | 73.9567242 | 8.1714371 | 17.0112836 | 61.9092006 | 81.9842344 |
| 2006 | -14.0865037 | 74.6468036 | -22.9332352 | 51.7135654 | 7.1352160 | 20.0750338 | 50.3831375 | 67.1098446 |
| 2007 | -12.5169061 | 115.1857091 | -25.0603889 | 90.1253202 | 9.7664148 | 16.7267071 | 72.3215389 | 95.5959086 |
| 2008 | -13.8809446 | 123.2679520 | -28.9178988 | 94.3500532 | 10.0385440 | 23.2743697 | 73.3806873 | 99.7354890 |
| 2009 | -10.4812491 | 88.5875489 | -25.6776114 | 62.9099375 | 7.4821226 | 26.3548017 | 66.7671973 | 83.7053460 |
| 2010 | -11.6180051 | 134.7744846 | -23.9478533 | 110.8266313 | 10.6301701 | 16.9381487 | 71.8557192 | 101.1640897 |
| 2011 | -11.8896364 | 146.2766028 | -21.8213260 | 124.4552768 | 11.6926064 | 29.3083705 | 102.8041715 | 128.8272580 |
| 2012 | -10.4500293 | 124.7340478 | -18.9347799 | 105.7992679 | 8.2703765 | 23.0972602 | 58.3733724 | 81.4706326 |
| 2013 | -13.9806479 | 122.6191384 | -21.9375430 | 100.6815954 | 11.6894270 | 25.4718727 | 77.1676495 | 102.6395222 |
| 2014 | -15.6254450 | 131.6735625 | -24.6783974 | 106.9951651 | 11.6894270 | 26.7592812 | 77.1676495 | 103.9289307 |
| 2015 | -14.6323907 | 127.1952137 | -23.1626950 | 104.0325187 | 11.6511542 | 26.0604840 | 77.0873292 | 103.1478132 |
| 2016 | -15.0744587 | 131.5504795 | -23.9332352 | 107.6172443 | 11.6511542 | 26.2913365 | 77.0873292 | 103.3786653 |
| 2017 | -13.5998929 | 123.5426655 | -21.5122312 | 102.0304343 | 11.6511542 | 25.4945172 | 77.0873292 | 102.5818464 |
| 2018 | -15.6542696 | 135.8868398 | -24.9125806 | 110.9742592 | 11.6511542 | 27.2621011 | 77.0873292 | 104.3494303 |
| 2019 | -15.0036376 | 129.1098860 | -23.8782306 | 105.2316554 | 11.6511542 | 26.2048772 | 77.0873292 | 103.2922064 |
| 2020 | -15.1397919 | 130.8836632 | -24.1100753 | 106.7735879 | 11.6511542 | 26.0506852 | 77.0873292 | 103.1380144 |
| 2021 | -15.0941217 | 130.9881584 | -24.0353647 | 106.9527937 | 11.6511542 | 26.3575114 | 77.0873292 | 103.4448406 |
| 2022 | -15.2176214 | 131.3814628 | -24.2299484 | 107.1515144 | 11.6511542 | 26.2627732 | 77.0873292 | 103.3501024 |
| 2023 | -15.2990243 | 132.7572411 | -24.3940226 | 108.3632185 | 11.6511542 | 26.5611884 | 77.0873292 | 103.6485176 |
| 2024 | -15.4136586 | 130.6085540 | -24.5433544 | 106.0651996 | 11.6511542 | 25.9539893 | 77.0873292 | 103.0413185 |
| 2025 | -15.2788283 | 132.1362905 | -24.3465802 | 107.7897103 | 11.6511542 | 26.4671290 | 77.0873292 | 103.5544582 |
| 2026 | -15.1740910 | 131.5649255 | -24.1777360 | 107.3871895 | 11.6511542 | 27.2682521 | 77.0873292 | 104.3555813 |
| 2027 | -15.3367346 | 131.7509390 | -24.4263180 | 107.3246210 | 11.6511542 | 26.1162426 | 77.0873292 | 103.2035718 |
| 2028 | -15.1219787 | 131.1562596 | -24.0691934 | 107.0870662 | 11.6511542 | 26.6826341 | 77.0873292 | 103.7696333 |
| 2029 | -15.2054867 | 131.0009363 | -24.2001127 | 106.8008236 | 11.6511542 | 25.9967430 | 77.0873292 | 103.0840722 |
| 2030 | -14.9760857 | 130.0541299 | -23.8512076 | 106.2029223 | 11.6511542 | 26.2279007 | 77.0873292 | 103.3152299 |
| 2031 | -16.0517661 | 135.9121749 | -25.5802957 | 110.3318792 | 11.6511542 | 26.9823839 | 77.0873292 | 104.0697131 |
| 2032 | -14.7097279 | 127.4825203 | -23.4398478 | 104.0426725 | 11.6511542 | 25.9729885 | 77.0873292 | 103.0603177 |
| 2033 | -15.9161399 | 136.1350637 | -25.3657323 | 110.7693314 | 11.6511542 | 27.1307839 | 77.0873292 | 104.2181131 |
| 2034 | -14.7125764 | 128.3249581 | -23.4481822 | 104.8767759 | 11.6511542 | 26.1750430 | 77.0873292 | 103.2623722 |
| 2035 | -17.0763358 | 137.5978550 | -27.1127502 | 110.4851048 | 11.6511542 | 25.3231177 | 77.0873292 | 102.4104469 |

Tables B-18 through B-31

Note: Where applicable, the projected data values shown in this appendix are shaded and the bill year data are in **bold** type.

**TABLE B-18. Variable OMP&R Component of
Transportation Charge for Each Contractor**

(in dollars)

Sheet 1 of 4

| Calendar Year | NORTH BAY AREA | | | SOUTH BAY AREA | | | | CENTRAL COASTAL AREA | | |
|------------------|--------------------------|------------------------|------------------|--|--|--|------------------|--|--------------------------------------|------------------|
| | Napa County FC&WCD | Solano County WA | Total | Alameda County FC&WCD, Zone 7 | Alameda County Water District | Santa Clara Valley Water District | Total | San Luis Obispo County FC&WCD | Santa Barbara County FC&WCD | Total |
| | [1] | [2] | [3] | [4] | [5] | [6] | [7] | [8] | [9] | [10] |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1962 | 0 | 0 | 0 | 2,051 | 34,919 | 0 | 36,970 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 7,900 | 49,811 | 0 | 57,711 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 5,931 | 68,203 | 0 | 74,134 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 10,918 | 68,765 | 62,926 | 142,609 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 19,330 | 52,135 | 121,141 | 192,606 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 19,958 | 53,785 | 163,255 | 236,998 | 0 | 0 | 0 |
| 1968 | 6,989 | 0 | 6,989 | 29,899 | 120,985 | 341,768 | 492,652 | 0 | 0 | 0 |
| 1969 | 8,551 | 0 | 8,551 | 31,859 | 3,904 | 298,968 | 334,731 | 0 | 0 | 0 |
| 1970 | 13,598 | 0 | 13,598 | 49,687 | 0 | 431,443 | 481,130 | 0 | 0 | 0 |
| 1971 | 10,609 | 0 | 10,609 | 23,842 | 28,328 | 416,329 | 468,499 | 0 | 0 | 0 |
| 1972 | 14,434 | 0 | 14,434 | 54,838 | 144,669 | 524,208 | 723,715 | 0 | 0 | 0 |
| 1973 | 14,449 | 0 | 14,449 | 18,398 | 15,590 | 547,807 | 581,795 | 0 | 0 | 0 |
| 1974 | 17,473 | 0 | 17,473 | 9,499 | 29 | 636,186 | 645,714 | 0 | 0 | 0 |
| 1975 | 14,779 | 0 | 14,779 | 22,318 | 4,765 | 425,284 | 452,367 | 0 | 0 | 0 |
| 1976 | 20,856 | 0 | 20,856 | 97,874 | 121,693 | 502,769 | 722,336 | 0 | 0 | 0 |
| 1977 | 22,635 | 0 | 22,635 | 82,578 | 123,044 | 497,792 | 703,414 | 0 | 0 | 0 |
| 1978 | 21,692 | 0 | 21,692 | 74,911 | 39,986 | 652,860 | 767,757 | 0 | 0 | 0 |
| 1979 | 16,237 | 0 | 16,237 | 137,101 | 77,145 | 652,629 | 866,875 | 0 | 0 | 0 |
| 1980 | 19,945 | 0 | 19,945 | 98,743 | 64,891 | 517,531 | 681,165 | 0 | 0 | 0 |
| 1981 | 23,842 | 0 | 23,842 | 126,437 | 141,456 | 567,968 | 835,861 | 0 | 0 | 0 |
| 1982 | 12,157 | 0 | 12,157 | 97,117 | 46,742 | 651,246 | 795,105 | 0 | 0 | 0 |
| 1983 | 2,342 | 0 | 2,342 | 8,171 | 5,412 | 148,743 | 162,326 | 0 | 0 | 0 |
| 1984 | 4,822 | 0 | 4,822 | 26,707 | 13,141 | 349,314 | 389,162 | 0 | 0 | 0 |
| 1985 | 10,188 | 0 | 10,188 | 79,863 | 102,790 | 466,291 | 648,944 | 0 | 0 | 0 |
| 1986 | 15,501 | 0 | 15,501 | 112,370 | 131,118 | 932,090 | 1,175,578 | 0 | 0 | 0 |
| 1987 | 27,223 | 0 | 27,223 | 216,211 | 234,290 | 812,631 | 1,263,132 | 0 | 0 | 0 |
| 1988 | 31,265 | 11,533 | 42,798 | 229,578 | 297,129 | 779,537 | 1,306,244 | 0 | 0 | 0 |
| 1989 | 37,874 | 66,850 | 104,724 | 306,533 | 304,275 | 1,051,562 | 1,662,370 | 0 | 0 | 0 |
| 1990 | 54,736 | 105,421 | 160,157 | 524,114 | 502,545 | 1,456,008 | 2,482,667 | 0 | 0 | 0 |
| 1991 | 8,159 | 18,824 | 26,983 | 105,736 | 142,105 | 316,839 | 564,680 | 0 | (2,636) | (2,636) |
| 1992 | 12,515 | 23,808 | 36,323 | 93,772 | 122,436 | 273,849 | 490,057 | 0 | 0 | 0 |
| 1993 | (7,223) | (17,293) | (24,516) | (36,162) | (12,912) | (78,024) | (127,098) | 0 | 0 | 0 |
| 1994 | 39,106 | 77,257 | 116,363 | 231,800 | 257,533 | 642,006 | 1,131,339 | 0 | 0 | 0 |
| 1995 | 15,701 | 36,724 | 52,425 | 160,663 | 93,610 | 151,287 | 405,560 | 0 | 0 | 0 |
| 1996 | 31,526 | 96,570 | 128,096 | 214,883 | 186,694 | 735,431 | 1,137,008 | 502 | 0 | 502 |
| 1997 | 29,683 | 116,555 | 146,238 | 351,185 | 219,799 | 912,861 | 1,483,845 | 34,932 | 233,584 | 268,516 |
| 1998 | (6,622) | (8,777) | (26,447) | (8,777) | (18,989) | (72,459) | (100,225) | (17,211) | (89,207) | (106,418) |
| 1999 | 15,783 | 52,547 | 68,330 | 251,523 | 188,675 | 432,833 | 873,031 | 52,855 | 284,356 | 337,211 |
| 2000 | 21,394 | 91,614 | 113,008 | 368,025 | 232,812 | 734,802 | 1,335,639 | 74,823 | 429,470 | 504,293 |
| 2001 | 290,720 | 533,929 | 824,649 | 1,693,609 | 999,733 | 2,477,771 | 5,171,113 | 532,756 | 2,356,666 | 2,889,422 |
| 2002 | 90,290 | 266,205 | 356,495 | 1,067,131 | 640,550 | 1,453,154 | 3,160,835 | 245,550 | 1,558,214 | 1,803,764 |
| 2003 | 131,087 | 266,054 | 397,141 | 1,076,761 | 647,616 | 2,300,657 | 4,025,034 | 287,979 | 1,744,045 | 2,032,024 |
| 2004 | 141,449 | 355,269 | 496,718 | 1,322,012 | 622,813 | 1,609,503 | 3,554,328 | 289,079 | 2,061,728 | 2,350,807 |
| 2005 | 188,524 | 391,703 | 580,227 | 1,478,744 | 846,127 | 2,485,729 | 4,810,600 | 348,515 | 1,913,840 | 2,262,355 |
| 2006 | 177,555 | 305,951 | 483,506 | 1,262,204 | 713,987 | 2,111,648 | 4,087,839 | 282,465 | 1,561,982 | 1,844,447 |
| 2007 | 327,473 | 593,470 | 920,943 | 1,588,942 | 887,740 | 2,668,488 | 5,145,170 | 360,970 | 2,651,831 | 3,012,801 |
| 2008 | 379,114 | 501,207 | 880,321 | 1,502,096 | 736,463 | 1,860,182 | 4,098,741 | 339,300 | 1,834,435 | 2,173,735 |
| 2009 | 239,671 | 291,174 | 530,845 | 1,010,679 | 541,973 | 1,670,724 | 3,123,376 | 138,152 | 1,293,301 | 1,611,453 |
| 2010 | 1,176,641 | 810,169 | 1,986,810 | 2,130,972 | 623,837 | 2,330,300 | 5,085,109 | 519,579 | 2,605,785 | 3,125,364 |
| 2011 | 1,525,624 | 1,092,467 | 2,618,091 | 2,686,911 | 1,116,141 | 4,060,156 | 7,863,208 | 623,009 | 5,859,837 | 6,482,846 |
| 2012 | 1,270,559 | 896,689 | 2,167,248 | 2,465,685 | 1,126,706 | 3,656,235 | 7,248,626 | 393,992 | 3,705,773 | 4,099,765 |
| 2013 | 560,847 | 431,730 | 992,577 | 1,789,128 | 840,059 | 2,486,838 | 5,116,026 | 496,365 | 4,668,661 | 5,165,026 |
| 2014 | 562,047 | 460,959 | 1,023,006 | 1,885,133 | 877,184 | 2,561,996 | 5,324,314 | 502,591 | 4,727,220 | 5,229,811 |
| 2015 | 885,463 | 638,368 | 1,523,831 | 2,788,183 | 1,317,960 | 3,934,779 | 8,040,922 | 2,578,695 | 4,691,781 | 7,270,476 |
| 2016 | 885,463 | 638,368 | 1,523,831 | 2,799,380 | 1,324,407 | 3,949,165 | 8,072,952 | 2,584,467 | 4,702,282 | 7,286,749 |
| 2017 | 885,463 | 638,368 | 1,523,831 | 2,748,624 | 1,296,849 | 3,881,910 | 7,927,383 | 2,564,546 | 4,666,038 | 7,230,584 |
| 2018 | 885,463 | 638,368 | 1,523,831 | 2,871,530 | 1,362,501 | 4,046,095 | 8,280,127 | 2,608,736 | 4,746,438 | 7,355,174 |
| 2019 | 885,463 | 638,368 | 1,523,831 | 2,796,601 | 1,322,613 | 3,945,834 | 8,065,049 | 2,582,305 | 4,698,349 | 7,280,654 |
| 2020 | 885,463 | 638,368 | 1,523,831 | 2,780,733 | 1,314,630 | 3,924,031 | 8,019,395 | 2,578,450 | 4,691,336 | 7,269,786 |
| 2021 | 885,583 | 638,390 | 1,523,973 | 2,805,852 | 1,327,685 | 3,958,031 | 8,091,568 | 2,586,121 | 4,705,292 | 7,291,413 |
| 2022 | 885,583 | 638,390 | 1,523,973 | 2,797,277 | 1,323,295 | 3,946,342 | 8,066,914 | 2,583,753 | 4,700,983 | 7,284,736 |
| 2023 | 885,583 | 638,390 | 1,523,973 | 2,819,437 | 1,334,997 | 3,976,111 | 8,130,545 | 2,591,213 | 4,714,556 | 7,305,769 |
| 2024 | 885,583 | 638,390 | 1,523,973 | 2,773,057 | 1,310,622 | 3,913,665 | 7,997,344 | 2,576,033 | 4,686,937 | 7,262,970 |
| 2025 | 885,583 | 638,390 | 1,523,973 | 2,812,760 | 1,331,443 | 3,967,176 | 8,111,379 | 2,588,861 | 4,710,278 | 7,299,139 |
| 2026 | 885,583 | 638,390 | 1,523,973 | 2,879,802 | 1,366,167 | 4,058,067 | 8,304,036 | 2,608,890 | 4,746,718 | 7,355,608 |
| 2027 | 885,583 | 638,390 | 1,523,973 | 2,784,503 | 1,316,720 | 3,928,974 | 8,030,197 | 2,580,089 | 4,694,318 | 7,274,407 |
| 2028 | 885,583 | 638,390 | 1,523,973 | 2,832,315 | 1,341,451 | 3,993,836 | 8,167,602 | 2,594,249 | 4,720,081 | 7,314,330 |
| 2029 | 885,583 | 638,390 | 1,523,973 | 2,776,026 | 1,312,208 | 3,917,630 | 8,005,864 | 2,577,102 | 4,688,882 | 7,265,984 |
| 2030 | 885,583 | 638,390 | 1,523,973 | 2,796,878 | 1,322,887 | 3,946,047 | 8,065,812 | 2,582,881 | 4,699,397 | 7,282,278 |
| 2031 | 885,583 | 638,390 | 1,523,973 | 2,848,218 | 1,350,419 | 4,014,499 | 8,213,136 | 2,601,743 | 4,733,715 | 7,335,458 |
| 2032 | 885,583 | 638,390 | 1,523,973 | 2,780,595 | 1,314,051 | 3,924,465 | 8,019,112 | 2,576,508 | 4,687,802 | 7,264,310 |
| 2033 | 885,583 | 638,390 | 1,523,973 | 2,860,162 | 1,356,643 | 4,030,645 | 8,247,450 | 2,605,453 | 4,740,465 | 7,345,918 |
| 2034 | 885,583 | 638,390 | 1,523,973 | 2,795,756 | 1,322,043 | 3,944,849 | 8,062,648 | 2,581,559 | 4,696,992 | 7,278,551 |
| 2035 | 885,583 | 638,390 | 1,523,973 | 2,708,227 | 1,278,003 | 3,824,594 | 7,810,824 | 2,560,261 | 4,658,242 | 7,218,503 |
| TOTAL | 26,240,343 | 21,263,622 | 47,503,965 | 85,973,308 | 43,331,833 | 134,817,839 | 264,122,980 | 59,978,118 | 138,179,767 | 198,157,885 |

Note: B-18 includes Extra Peaking Charges for additional power shown in Table 9.

**TABLE B-18. Variable OMP&R Component of
Transportation Charge for Each Contractor**

(in dollars)

Sheet 2 of 4

| Calendar Year | SAN JOAQUIN VALLEY AREA | | | | | | | | |
|------------------|--------------------------------------|---|---|--------------------------------|--------------|-----------------------|-------------------------------|---|-------------|
| | Dudley Ridge Water District | Empire West Side Irrigation District | Future Contractor San Joaquin Valley | Kern County Water Agency | | County of Kings | Oak Flat Water District | Tulare Lake Basin Water Storage District | Total |
| | | | | Municipal and Industrial | Agricultural | | | | |
| | [11] | [12] | [13] | [14] | [15] | [16] | [17] | [18] | [19] |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1968 | 68,977 | 5,176 | 0 | 0 | 440,922 | 2,355 | 4,760 | 65,680 | 587,870 |
| 1969 | 56,774 | 101 | 0 | 0 | 321,387 | 181 | 3,338 | 17,956 | 399,737 |
| 1970 | 69,818 | 6,811 | 0 | 0 | 470,867 | 0 | 5,595 | 16,550 | 569,641 |
| 1971 | 53,097 | 7,747 | 0 | 0 | 769,054 | 4,785 | 6,353 | 158,419 | 999,455 |
| 1972 | 62,365 | 8,515 | 0 | 0 | 1,151,788 | 2,057 | 7,375 | 379,686 | 1,611,786 |
| 1973 | 33,931 | 4,615 | 0 | 0 | 770,121 | 2,307 | 3,017 | 77,630 | 891,621 |
| 1974 | 49,114 | 4,413 | 0 | 46,752 | 677,660 | 2,206 | 3,114 | 106,332 | 889,591 |
| 1975 | 63,140 | 4,671 | 0 | 34,580 | 848,249 | 2,491 | 3,920 | 134,295 | 1,091,346 |
| 1976 | 70,851 | 5,132 | 0 | 94,853 | 966,820 | 2,737 | 4,910 | 100,597 | 1,245,701 |
| 1977 | 26,565 | 1,758 | 0 | 84,875 | 498,624 | 3,644 | 2,602 | 43,067 | 661,135 |
| 1978 | 108,944 | 938 | 0 | 190,875 | 1,316,975 | 4,319 | 6,294 | 24,901 | 1,953,046 |
| 1979 | 107,956 | 4,871 | 0 | 194,048 | 2,371,175 | 5,602 | 13,172 | 434,472 | 3,131,297 |
| 1980 | 88,746 | 1,935 | 0 | 121,603 | 1,731,588 | 4,762 | 7,766 | 163,301 | 2,119,701 |
| 1981 | 129,687 | 18,533 | 0 | 263,077 | 2,398,339 | 7,275 | 8,904 | 263,922 | 3,089,737 |
| 1982 | 108,561 | 937 | 0 | 145,246 | 2,375,404 | 4,541 | 6,763 | 48,137 | 2,689,589 |
| 1983 | 61,443 | 0 | 0 | 13,954 | 929,183 | 5,662 | 3,232 | 1,218 | 1,014,692 |
| 1984 | 82,423 | 0 | 0 | 216,437 | 1,996,259 | 5,946 | 7,475 | 10,496 | 2,319,036 |
| 1985 | 114,571 | 12,938 | 0 | 242,645 | 2,567,184 | 8,422 | 8,815 | 271,970 | 3,226,545 |
| 1986 | 236,756 | 5,513 | 0 | 377,798 | 4,876,960 | 17,433 | 16,927 | 376,088 | 5,907,475 |
| 1987 | 187,090 | 10,273 | 0 | 504,168 | 4,230,949 | 16,140 | 15,529 | 375,604 | 5,339,753 |
| 1988 | 188,170 | 14,894 | 0 | 524,965 | 4,250,194 | 15,528 | 11,928 | 374,528 | 5,380,207 |
| 1989 | 285,261 | 15,450 | 0 | 681,238 | 6,158,648 | 20,063 | 21,693 | 649,604 | 7,831,957 |
| 1990 | 218,786 | 7,710 | 0 | 845,877 | 4,778,185 | 12,056 | 12,072 | 344,008 | 6,218,694 |
| 1991 | 4,393 | 1,047 | 0 | 185,013 | 47,869 | 0 | 521 | 10,331 | 249,174 |
| 1992 | 76,840 | 4,426 | 0 | 227,332 | 1,699,824 | 6,059 | 5,222 | 151,055 | 2,170,758 |
| 1993 | 20,064 | 4,843 | 0 | 78,585 | 340,588 | 2,090 | 1,467 | 123,913 | 571,550 |
| 1994 | 135,626 | 7,854 | 0 | 471,316 | 3,417,815 | 9,967 | 10,102 | 293,748 | 4,346,428 |
| 1995 | 181,772 | 4,611 | 0 | 409,656 | 3,437,735 | 11,619 | 10,492 | 288,010 | 4,343,895 |
| 1996 | 286,064 | 9,577 | 0 | 715,404 | 6,328,965 | 21,039 | 16,403 | 1,196,303 | 8,573,755 |
| 1997 | 308,515 | 0 | 0 | 650,416 | 5,627,735 | 0 | 15,559 | 94,838 | 6,697,063 |
| 1998 | 16,993 | (54) | 0 | (16,341) | 91,651 | (2) | 1,171 | (2,095) | 91,323 |
| 1999 | 191,682 | 10,198 | 0 | 463,890 | 3,954,090 | 12,844 | 11,542 | 937,238 | 5,581,484 |
| 2000 | 191,316 | 5,685 | 0 | 377,429 | 3,950,797 | 11,377 | 10,171 | 626,712 | 5,173,487 |
| 2001 | 794,925 | 25,801 | 0 | 440,051 | 11,683,803 | 29,595 | 46,202 | 1,129,954 | 14,150,331 |
| 2002 | 425,339 | 12,217 | 0 | 818,438 | 7,372,457 | 24,817 | 29,669 | 839,131 | 9,522,068 |
| 2003 | 453,378 | 14,128 | 0 | 1,083,449 | 9,371,346 | 36,324 | 28,675 | 1,041,317 | 12,028,617 |
| 2004 | 518,783 | 37,651 | 0 | 1,402,130 | 8,849,309 | 95,692 | 33,562 | 858,902 | 11,796,029 |
| 2005 | 974,062 | 45,638 | 0 | 1,094,865 | 17,389,748 | 235,763 | 33,910 | 1,666,527 | 21,440,513 |
| 2006 | 691,355 | 31,479 | 0 | 956,960 | 13,278,737 | 91,407 | 27,946 | 1,037,866 | 16,115,750 |
| 2007 | 609,682 | 28,151 | 0 | 758,733 | 11,913,336 | 78,095 | 32,344 | 1,176,313 | 14,596,654 |
| 2008 | 361,797 | 15,452 | 0 | 721,789 | 7,456,819 | 62,589 | 23,425 | 553,186 | 9,195,057 |
| 2009 | 200,649 | 9,778 | 0 | 71,078 | 5,462,265 | 32,065 | 11,972 | 348,028 | 6,135,835 |
| 2010 | 511,166 | 19,612 | 0 | 1,023,924 | 9,832,044 | 70,594 | 33,648 | 631,734 | 12,122,722 |
| 2011 | 721,439 | 42,991 | 0 | 2,104,291 | 16,082,794 | 136,911 | 52,474 | 1,274,295 | 20,415,195 |
| 2012 | 746,430 | 44,481 | 0 | 2,142,593 | 15,671,621 | 140,487 | 60,653 | 1,318,436 | 20,124,701 |
| 2013 | 693,850 | 41,347 | 0 | 1,995,503 | 15,054,730 | 131,811 | 50,906 | 1,225,563 | 19,193,710 |
| 2014 | 758,662 | 45,210 | 0 | 2,178,889 | 16,306,693 | 143,790 | 56,975 | 1,340,042 | 20,830,261 |
| 2015 | 682,181 | 43,228 | 0 | 2,084,824 | 16,009,387 | 137,632 | 53,891 | 1,281,306 | 20,292,449 |
| 2016 | 693,110 | 43,921 | 0 | 2,121,058 | 16,303,459 | 139,781 | 54,525 | 1,301,834 | 20,657,688 |
| 2017 | 655,386 | 41,530 | 0 | 2,004,436 | 15,449,191 | 132,366 | 51,224 | 1,230,980 | 19,565,113 |
| 2018 | 739,069 | 46,833 | 0 | 2,256,030 | 17,208,721 | 148,813 | 59,495 | 1,388,157 | 21,847,118 |
| 2019 | 689,017 | 43,661 | 0 | 2,106,500 | 16,174,471 | 138,976 | 54,418 | 1,294,146 | 20,501,189 |
| 2020 | 624,119 | 43,199 | 0 | 2,088,137 | 16,089,273 | 137,541 | 53,222 | 1,280,435 | 20,315,926 |
| 2021 | 637,418 | 44,119 | 0 | 2,129,170 | 16,344,431 | 140,396 | 55,007 | 1,307,719 | 20,658,260 |
| 2022 | 633,311 | 43,835 | 0 | 2,117,068 | 16,276,446 | 139,515 | 54,380 | 1,299,294 | 20,563,849 |
| 2023 | 646,246 | 44,730 | 0 | 2,158,557 | 16,554,725 | 142,291 | 55,907 | 1,325,830 | 20,928,286 |
| 2024 | 619,928 | 42,909 | 0 | 2,075,031 | 16,005,512 | 136,641 | 52,682 | 1,271,837 | 20,204,540 |
| 2025 | 642,169 | 44,448 | 0 | 2,145,258 | 16,462,789 | 141,416 | 55,454 | 1,317,466 | 20,809,000 |
| 2026 | 676,892 | 46,851 | 0 | 2,251,378 | 17,109,659 | 148,871 | 60,246 | 1,388,704 | 21,682,601 |
| 2027 | 626,960 | 43,395 | 0 | 2,098,021 | 16,165,054 | 138,151 | 53,457 | 1,286,265 | 20,411,303 |
| 2028 | 651,509 | 45,094 | 0 | 2,172,760 | 16,616,907 | 143,422 | 56,883 | 1,336,629 | 21,023,204 |
| 2029 | 621,781 | 43,037 | 0 | 2,081,123 | 16,048,220 | 137,039 | 52,882 | 1,275,638 | 20,259,720 |
| 2030 | 631,800 | 43,730 | 0 | 2,110,696 | 16,214,910 | 139,190 | 54,404 | 1,296,193 | 20,490,923 |
| 2031 | 664,501 | 45,994 | 0 | 2,218,914 | 16,981,634 | 146,211 | 57,831 | 1,363,284 | 21,478,369 |
| 2032 | 620,751 | 42,966 | 0 | 2,073,445 | 15,942,675 | 136,818 | 53,343 | 1,273,526 | 20,143,524 |
| 2033 | 670,934 | 46,439 | 0 | 2,238,915 | 17,108,015 | 147,592 | 58,675 | 1,376,480 | 21,647,050 |
| 2034 | 629,509 | 43,572 | 0 | 2,101,418 | 16,128,846 | 138,698 | 54,391 | 1,291,493 | 20,387,927 |
| 2035 | 592,584 | 41,016 | 0 | 2,000,158 | 15,661,282 | 130,771 | 47,800 | 1,215,738 | 19,689,349 |
| TOTAL | 25,996,983 | 1,529,561 | 0 | 69,570,881 | 584,674,913 | 4,477,576 | 1,940,682 | 50,002,762 | 738,193,359 |

**TABLE B-18. Variable OMP&R Component of
Transportation Charge for Each Contractor**

(in dollars)

Sheet 3 of 4

| Calendar Year | SOUTHERN CALIFORNIA AREA | | | | | | | | | |
|------------------|---|------------------------------------|--|--|---------------------------|---|---------------------------|-------------------------------|--|---|
| | Antelope Valley- East Kern Water Agency | Castaic Lake Water Agency | Coachella Valley Water District | Crestline- Lake Arrowhead Water Agency | Desert Water Agency | Littlerock Creek Irrigation District | Mojave Water Agency | Palmdale Water District | San Bernardino Valley Municipal Water District | San Gabriel Valley Municipal Water District |
| | [20] | [21] | [22] | [23] | [24] | [25] | [26] | [27] | [28] | [29] |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1968 | 0 | 30,401 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1969 | 0 | 30,627 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1970 | 0 | 39,430 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1971 | 0 | 34,871 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1972 | 780 | 47,571 | 0 | 12,785 | 0 | 4,496 | 1,515 | 0 | 32,107 | 0 |
| 1973 | 286 | 28,968 | 102,812 | 6,896 | 159,536 | 3,855 | 0 | 0 | 301,444 | 0 |
| 1974 | 15,558 | 28,982 | 100,955 | 9,890 | 157,742 | 4,932 | 221 | 0 | 177,173 | 5,961 |
| 1975 | 99,186 | 28,568 | 108,253 | 12,758 | 170,111 | 6,391 | 0 | 0 | 136,066 | 50,723 |
| 1976 | 385,090 | 38,365 | 135,276 | 17,835 | 213,594 | 8,164 | 0 | 0 | 139,354 | 65,476 |
| 1977 | 199,166 | 21,006 | 0 | 23,598 | 0 | 1,974 | 1,702 | 0 | 239,663 | 74,838 |
| 1978 | 581,729 | 45,550 | 174,116 | 20,875 | 264,178 | 2,731 | 0 | 0 | 37,043 | 67,462 |
| 1979 | 1,058,904 | 83,940 | 228,437 | 28,603 | 340,510 | 2,328 | 90,803 | 0 | 236 | 3,668 |
| 1980 | 1,390,117 | 51,143 | 256,759 | 29,229 | 401,038 | 3,667 | 94,362 | 0 | 0 | 16,504 |
| 1981 | 1,480,362 | 118,583 | 274,149 | 33,632 | 430,304 | 23,861 | 90,590 | 0 | 254,649 | 57,523 |
| 1982 | 923,973 | 132,575 | 292,674 | 27,190 | 461,216 | 0 | 230,608 | 0 | 126,461 | 189,895 |
| 1983 | 333,772 | (335,712) | 172,336 | 10,792 | 272,477 | 385 | 0 | 0 | (71,602) | (8,768) |
| 1984 | 485,847 | (142,910) | 273,597 | 19,572 | 433,785 | 15 | 0 | 0 | (66,353) | (91,433) |
| 1985 | 821,069 | (335,343) | 413,406 | 34,603 | 657,011 | 0 | 0 | 32,464 | (47,544) | (32,348) |
| 1986 | 1,109,047 | 54,812 | 728,808 | 60,274 | 1,160,650 | 5,548 | 0 | 105,375 | 69,170 | 101,843 |
| 1987 | 1,019,605 | (40,745) | 668,383 | 63,601 | 1,083,530 | 32,651 | 585 | 157,843 | 85,076 | 49,930 |
| 1988 | 1,019,793 | (74,006) | 688,891 | 66,914 | 1,134,141 | 11,991 | 300 | 50,654 | 92,465 | 38,688 |
| 1989 | 1,736,901 | 178,359 | 978,885 | 97,114 | 1,633,489 | 38,269 | 8,951 | 350,953 | 340,460 | 210,334 |
| 1990 | 2,442,558 | 422,502 | 1,402,619 | 110,934 | 2,313,410 | 90,472 | 0 | 446,408 | 599,573 | 530,099 |
| 1991 | 286,485 | (3,054) | 277,078 | 33,945 | 456,999 | 17,978 | 128,405 | 132,700 | 35,339 | 52,116 |
| 1992 | 587,340 | (208,900) | 240,119 | 11,952 | 396,022 | 4,871 | 241,338 | 78,306 | (22,718) | (53,500) |
| 1993 | (190,611) | (491,161) | (809,033) | (2,389) | (1,334,429) | (3,246) | (61,112) | (29,466) | (157,452) | (519,798) |
| 1994 | 1,841,902 | 66,338 | 189,616 | 34,480 | 312,714 | 41,201 | 731,185 | 315,446 | 122,829 | 204,783 |
| 1995 | 761,209 | (247,735) | (251,547) | 7,960 | (414,889) | 7,727 | 165,622 | 114,342 | (7,579) | (140,714) |
| 1996 | 1,883,530 | 72,171 | 508,274 | 18,313 | 838,330 | 16,510 | 289,044 | 385,745 | 49,537 | 133,848 |
| 1997 | 2,121,818 | 22,440 | 365,342 | 24,076 | 330,153 | 15,099 | 414,596 | 438,212 | 61,553 | 115,862 |
| 1998 | (577,005) | (733,387) | (3,979,131) | (2,991) | (3,279,362) | (4,405) | (46,209) | (84,367) | (87,188) | (432,227) |
| 1999 | 1,250,830 | (475,206) | (683,915) | 18,893 | (787,153) | 6,193 | 172,541 | 252,025 | (174,420) | (244,303) |
| 2000 | 1,698,519 | (379,650) | (428,801) | 0 | (622,206) | 0 | 275,941 | 184,125 | (196,586) | (161,765) |
| 2001 | 10,857,042 | 4,500,259 | 1,723,368 | 208,608 | 2,498,521 | 0 | 859,014 | 1,806,136 | 4,409,115 | 392,839 |
| 2002 | 3,936,303 | 2,178,119 | 898,401 | 162,215 | 1,214,455 | 0 | 332,107 | 1,249,539 | 3,140,597 | 1,091,911 |
| 2003 | 5,095,573 | 3,148,576 | 1,051,496 | 145,540 | 1,494,079 | 0 | 1,427,777 | 980,169 | 1,637,973 | 1,375,840 |
| 2004 | 5,199,834 | 3,579,218 | 1,204,678 | 192,014 | 1,387,543 | 0 | 1,339,158 | 1,057,921 | 3,790,857 | 821,198 |
| 2005 | 5,993,623 | 3,010,143 | 3,450,502 | 89,937 | 3,983,671 | 0 | 1,579,924 | 1,173,260 | 2,653,088 | 1,134,830 |
| 2006 | 6,446,014 | 2,306,999 | 7,172,443 | 56,766 | 2,937,934 | 0 | 3,184,993 | 1,001,737 | 2,197,141 | 956,826 |
| 2007 | 9,371,395 | 4,241,941 | 7,375,838 | 231,290 | 3,045,298 | 0 | 6,186,435 | 2,224,691 | 6,106,855 | 405,315 |
| 2008 | 5,892,157 | 3,866,063 | 4,932,273 | 116,363 | 2,677,200 | 3,068 | 3,590,170 | 1,749,415 | 4,160,153 | 767,767 |
| 2009 | 3,865,385 | 2,308,687 | 3,031,434 | 89,716 | 1,214,227 | 3,643 | 2,992,279 | 1,330,421 | 3,055,719 | 765,871 |
| 2010 | 11,073,381 | 4,121,296 | 6,738,420 | 510,692 | 2,724,334 | 105,069 | 3,894,683 | 1,658,397 | 5,673,321 | 1,212,526 |
| 2011 | 9,830,738 | 3,833,223 | 9,066,161 | 538,574 | 3,653,332 | 328,496 | 14,182,299 | 3,042,157 | 13,464,996 | 2,096,980 |
| 2012 | 8,642,961 | 3,322,097 | 7,653,304 | 474,008 | 3,084,002 | 280,394 | 12,068,657 | 2,596,692 | 11,367,156 | 1,327,642 |
| 2013 | 8,943,121 | 3,221,811 | 7,703,142 | 500,482 | 3,104,085 | 281,692 | 12,126,729 | 2,608,716 | 11,441,860 | 1,336,288 |
| 2014 | 9,922,391 | 3,851,826 | 8,283,846 | 555,046 | 3,338,087 | 303,421 | 12,847,132 | 2,809,941 | 12,304,229 | 3,448,858 |
| 2015 | 18,013,537 | 9,903,896 | 16,001,444 | 835,854 | 6,447,998 | 293,007 | 13,043,625 | 2,713,496 | 11,883,701 | 3,330,984 |
| 2016 | 18,621,338 | 10,245,162 | 16,608,997 | 863,216 | 6,692,819 | 302,893 | 13,505,186 | 2,805,053 | 12,317,189 | 3,457,457 |
| 2017 | 17,439,120 | 9,713,297 | 15,385,896 | 810,043 | 6,199,954 | 283,663 | 12,698,952 | 2,626,968 | 11,410,140 | 3,202,846 |
| 2018 | 19,245,661 | 10,564,749 | 17,218,569 | 891,643 | 6,938,455 | 313,048 | 13,935,166 | 2,899,099 | 12,769,246 | 3,584,350 |
| 2019 | 18,294,924 | 10,018,054 | 16,261,369 | 846,737 | 6,552,738 | 297,584 | 13,223,196 | 2,755,883 | 12,059,389 | 3,385,092 |
| 2020 | 18,538,131 | 10,164,846 | 16,445,761 | 858,764 | 6,627,042 | 301,540 | 14,022,160 | 2,792,519 | 12,196,134 | 3,423,476 |
| 2021 | 18,545,606 | 10,181,906 | 16,497,790 | 858,239 | 6,648,007 | 301,661 | 14,024,234 | 2,793,645 | 12,234,718 | 3,434,307 |
| 2022 | 18,608,313 | 10,200,824 | 16,619,057 | 861,878 | 6,696,873 | 302,681 | 14,068,908 | 2,803,091 | 12,324,649 | 3,459,551 |
| 2023 | 18,793,606 | 10,316,178 | 16,735,433 | 869,540 | 6,743,769 | 305,695 | 14,213,063 | 2,831,003 | 12,410,954 | 3,483,776 |
| 2024 | 18,517,333 | 10,097,407 | 16,451,368 | 856,834 | 6,629,301 | 301,201 | 13,972,212 | 2,789,386 | 12,200,292 | 3,424,643 |
| 2025 | 18,707,542 | 10,261,580 | 16,719,898 | 867,202 | 6,737,509 | 304,295 | 14,143,762 | 2,818,038 | 12,399,433 | 3,480,543 |
| 2026 | 18,635,403 | 10,223,260 | 16,587,147 | 863,133 | 6,684,015 | 303,122 | 14,059,110 | 2,807,172 | 12,300,985 | 3,452,908 |
| 2027 | 18,661,335 | 10,217,304 | 16,631,721 | 864,177 | 6,701,976 | 303,544 | 14,107,651 | 2,811,078 | 12,334,041 | 3,462,187 |
| 2028 | 18,571,795 | 10,194,689 | 16,532,075 | 861,199 | 6,661,823 | 302,087 | 14,034,219 | 2,797,590 | 12,260,144 | 3,441,444 |
| 2029 | 18,552,499 | 10,167,438 | 16,536,905 | 859,708 | 6,663,769 | 301,773 | 14,032,177 | 2,794,683 | 12,263,726 | 3,442,448 |
| 2030 | 18,413,800 | 10,110,518 | 16,367,903 | 853,028 | 6,595,668 | 299,517 | 13,924,431 | 2,773,790 | 12,138,395 | 3,407,269 |
| 2031 | 19,275,949 | 10,503,595 | 17,294,250 | 892,582 | 6,968,952 | 313,541 | 14,540,540 | 2,903,661 | 12,825,371 | 3,600,104 |
| 2032 | 18,052,627 | 9,904,862 | 16,053,949 | 837,581 | 6,469,156 | 293,642 | 13,638,770 | 2,719,384 | 11,905,567 | 3,341,914 |
| 2033 | 19,294,035 | 10,545,240 | 17,258,199 | 894,163 | 6,954,424 | 313,835 | 14,569,166 | 2,906,386 | 12,798,635 | 3,592,599 |
| 2034 | 18,160,563 | 9,984,269 | 16,170,394 | 841,903 | 6,516,078 | 295,398 | 13,729,835 | 2,735,644 | 11,991,922 | 3,366,154 |
| 2035 | 19,565,380 | 10,518,182 | 17,532,335 | 906,944 | 7,064,891 | 318,249 | 14,760,035 | 2,947,260 | 13,001,934 | 3,649,666 |
| TOTAL | 520,346,176 | 259,636,907 | 420,624,124 | 22,796,953 | 183,734,387 | 8,001,417 | 371,688,743 | 87,044,786 | 345,501,381 | 89,843,147 |

**TABLE B-18. Variable OMP&R Component of
Transportation Charge for Each Contractor**

(in dollars)

Sheet 4 of 4

| Calendar Year | SOUTHERN CALIFORNIA AREA (continued) | | | | FEATHER RIVER AREA | | | | South Bay Area Future Contractor | GRAND TOTAL |
|------------------|---|--|---|---------------|-------------------------|-----------------------|----------------------------|-------|--|----------------|
| | San Geronio Pass Water Agency | The Metropolitan Water District of Southern California | Ventura County Flood Control District | Total | City of Yuba City | County of Butte | Plumas County FC&WCD | Total | | |
| | [30] | [31] | [32] | [33] | [34] | [35] | [36] | [37] | [38] | [39] |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 36,970 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 57,711 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 74,134 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 142,609 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 192,606 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 236,998 |
| 1968 | 0 | 0 | 0 | 30,401 | 0 | 0 | 0 | 0 | 0 | 1,117,912 |
| 1969 | 0 | 0 | 0 | 30,627 | 0 | 0 | 0 | 0 | 0 | 773,646 |
| 1970 | 0 | 0 | 0 | 39,430 | 0 | 0 | 0 | 0 | 0 | 1,103,799 |
| 1971 | 0 | 0 | 0 | 34,871 | 0 | 0 | 0 | 0 | 0 | 1,513,434 |
| 1972 | 0 | 848,011 | 0 | 947,266 | 0 | 0 | 0 | 0 | 0 | 3,297,202 |
| 1973 | 0 | 1,083,328 | 0 | 1,687,126 | 0 | 0 | 0 | 0 | 0 | 3,174,991 |
| 1974 | 0 | 1,872,297 | 0 | 2,373,712 | 0 | 0 | 0 | 0 | 0 | 3,926,489 |
| 1975 | 0 | 3,887,152 | 0 | 4,499,209 | 0 | 0 | 0 | 0 | 0 | 6,057,701 |
| 1976 | 0 | 5,485,263 | 0 | 6,488,418 | 0 | 0 | 0 | 0 | 0 | 8,477,311 |
| 1977 | 0 | (796,686) | 0 | (234,739) | 0 | 0 | 0 | 0 | 0 | 1,152,444 |
| 1978 | 0 | 3,696,428 | 0 | 4,890,112 | 0 | 0 | 0 | 0 | 0 | 7,632,606 |
| 1979 | 0 | 4,021,960 | 0 | 5,859,389 | 0 | 0 | 0 | 0 | 0 | 9,873,798 |
| 1980 | 0 | 5,362,245 | 0 | 7,605,064 | 0 | 0 | 0 | 0 | 0 | 10,425,875 |
| 1981 | 0 | 10,862,932 | 0 | 13,626,585 | 0 | 0 | 0 | 0 | 0 | 17,576,025 |
| 1982 | 0 | 7,685,168 | 0 | 10,069,760 | 0 | 0 | 0 | 0 | 0 | 13,566,611 |
| 1983 | 0 | (8,994,497) | 0 | (8,620,817) | 0 | 0 | 0 | 0 | 0 | (7,441,457) |
| 1984 | 0 | (7,633,741) | 0 | (6,721,621) | 0 | 0 | 0 | 0 | 0 | (4,008,601) |
| 1985 | 0 | (15,739,366) | 0 | (14,196,048) | 0 | 0 | 0 | 0 | 0 | (10,310,371) |
| 1986 | 0 | 1,135,478 | 0 | 4,531,005 | 0 | 0 | 0 | 0 | 0 | 11,629,559 |
| 1987 | 0 | (3,007,097) | 0 | 116,362 | 0 | 0 | 0 | 0 | 0 | 6,746,470 |
| 1988 | 0 | (3,407,929) | 0 | (378,098) | 0 | 0 | 0 | 0 | 0 | 6,351,151 |
| 1989 | 0 | 9,488,536 | 0 | 15,062,251 | 0 | 0 | 0 | 0 | 0 | 24,661,302 |
| 1990 | 0 | 30,759,725 | 204,582 | 39,322,882 | 0 | 0 | 0 | 0 | 0 | 48,184,400 |
| 1991 | 0 | 184,870 | 22,623 | 1,625,484 | 0 | 0 | 0 | 0 | 0 | 2,463,685 |
| 1992 | 0 | (9,471,028) | 0 | (8,196,198) | 0 | 0 | 0 | 0 | 0 | (5,499,060) |
| 1993 | 0 | (21,473,875) | 0 | (25,072,572) | 0 | 0 | 0 | 0 | 0 | (24,652,636) |
| 1994 | 0 | 4,059,683 | 0 | 7,920,177 | 0 | 0 | 0 | 0 | 0 | 13,514,307 |
| 1995 | 0 | (4,895,977) | 0 | (4,901,581) | 0 | 0 | 0 | 0 | 0 | (99,701) |
| 1996 | 0 | 1,859,275 | 0 | 6,054,577 | 0 | 0 | 0 | 0 | 0 | 15,893,938 |
| 1997 | 0 | 2,428,729 | (921) | 6,336,979 | 0 | 0 | 0 | 0 | 0 | 14,932,641 |
| 1998 | 0 | (14,593,773) | (68,568) | (23,889,113) | 0 | 0 | 0 | 0 | 0 | (24,030,880) |
| 1999 | 0 | (9,859,076) | (31,704) | (10,555,295) | 0 | 0 | 0 | 0 | 0 | (3,695,239) |
| 2000 | 0 | (15,820,572) | 3,872 | (15,447,123) | 0 | 0 | 0 | 0 | 0 | (8,320,696) |
| 2001 | 0 | 159,921,465 | 268,846 | 187,445,213 | 0 | 0 | 0 | 0 | 0 | 210,480,728 |
| 2002 | 0 | 59,718,694 | 279,352 | 74,201,693 | 0 | 0 | 0 | 0 | 0 | 89,044,855 |
| 2003 | 7,276 | 94,182,025 | 357,585 | 110,903,909 | 0 | 0 | 0 | 0 | 0 | 129,386,725 |
| 2004 | 97,687 | 106,539,803 | 415,018 | 125,624,929 | 0 | 0 | 0 | 0 | 0 | 143,822,811 |
| 2005 | 84,291 | 113,878,785 | 123,138 | 137,155,192 | 0 | 0 | 0 | 0 | 0 | 166,248,887 |
| 2006 | 442,624 | 84,319,332 | 95,670 | 111,118,479 | 0 | 0 | 0 | 0 | 0 | 133,650,021 |
| 2007 | 613,747 | 138,048,775 | 317,740 | 178,169,320 | 0 | 0 | 0 | 0 | 0 | 201,844,888 |
| 2008 | 752,055 | 85,457,553 | 415,599 | 114,379,836 | 0 | 0 | 0 | 0 | 0 | 130,727,690 |
| 2009 | 669,955 | 54,211,551 | 325,661 | 73,864,569 | 0 | 0 | 0 | 0 | 0 | 85,266,078 |
| 2010 | 2,026,362 | 71,755,588 | 799,280 | 112,293,349 | 0 | 0 | 0 | 0 | 0 | 134,613,354 |
| 2011 | 1,876,231 | 215,431,492 | 2,433,387 | 279,778,066 | 0 | 0 | 0 | 0 | 0 | 317,157,406 |
| 2012 | 1,748,358 | 182,545,310 | 2,069,831 | 237,180,412 | 0 | 0 | 0 | 0 | 0 | 270,820,752 |
| 2013 | 3,239,101 | 178,944,142 | 1,982,054 | 235,433,223 | 0 | 0 | 0 | 0 | 0 | 265,900,562 |
| 2014 | 3,239,101 | 191,395,873 | 2,110,645 | 254,410,396 | 0 | 0 | 0 | 0 | 0 | 286,817,787 |
| 2015 | 3,239,101 | 206,225,168 | 2,153,613 | 294,085,424 | 0 | 0 | 0 | 0 | 0 | 331,213,101 |
| 2016 | 3,239,101 | 213,673,647 | 2,227,735 | 304,559,793 | 0 | 0 | 0 | 0 | 0 | 342,101,013 |
| 2017 | 3,239,101 | 200,329,682 | 2,108,372 | 285,448,034 | 0 | 0 | 0 | 0 | 0 | 321,694,944 |
| 2018 | 3,239,101 | 220,924,655 | 2,297,960 | 314,821,702 | 0 | 0 | 0 | 0 | 0 | 353,827,952 |
| 2019 | 3,239,101 | 209,072,288 | 2,179,850 | 298,186,205 | 0 | 0 | 0 | 0 | 0 | 335,556,927 |
| 2020 | 3,239,101 | 211,788,858 | 2,211,418 | 302,609,750 | 0 | 0 | 0 | 0 | 0 | 339,738,687 |
| 2021 | 3,239,101 | 212,305,037 | 2,214,767 | 303,279,018 | 0 | 0 | 0 | 0 | 0 | 340,844,232 |
| 2022 | 3,239,101 | 213,260,923 | 2,219,355 | 304,665,204 | 0 | 0 | 0 | 0 | 0 | 342,104,676 |
| 2023 | 3,239,101 | 215,230,287 | 2,244,106 | 307,416,511 | 0 | 0 | 0 | 0 | 0 | 345,305,084 |
| 2024 | 3,239,101 | 211,099,054 | 2,198,616 | 301,776,748 | 0 | 0 | 0 | 0 | 0 | 338,765,575 |
| 2025 | 3,239,101 | 214,546,179 | 2,232,486 | 306,457,568 | 0 | 0 | 0 | 0 | 0 | 344,201,059 |
| 2026 | 3,239,101 | 213,331,990 | 2,223,904 | 304,711,250 | 0 | 0 | 0 | 0 | 0 | 343,577,468 |
| 2027 | 3,239,101 | 213,511,943 | 2,223,435 | 305,069,493 | 0 | 0 | 0 | 0 | 0 | 342,309,373 |
| 2028 | 3,239,101 | 212,665,324 | 2,217,559 | 303,779,049 | 0 | 0 | 0 | 0 | 0 | 341,808,158 |
| 2029 | 3,239,101 | 212,383,359 | 2,212,247 | 303,449,834 | 0 | 0 | 0 | 0 | 0 | 340,505,375 |
| 2030 | 3,239,101 | 210,727,076 | 2,199,190 | 301,049,686 | 0 | 0 | 0 | 0 | 0 | 338,412,672 |
| 2031 | 3,239,101 | 220,733,650 | 2,287,216 | 315,378,512 | 0 | 0 | 0 | 0 | 0 | 353,929,448 |
| 2032 | 3,239,101 | 206,560,325 | 2,154,689 | 295,171,567 | 0 | 0 | 0 | 0 | 0 | 332,122,486 |
| 2033 | 3,239,101 | 220,959,042 | 2,295,289 | 315,620,114 | 0 | 0 | 0 | 0 | 0 | 354,384,505 |
| 2034 | 3,239,101 | 208,142,454 | 2,171,397 | 297,345,112 | 0 | 0 | 0 | 0 | 0 | 334,598,211 |
| 2035 | 3,239,101 | 222,325,123 | 2,295,107 | 318,124,207 | 0 | 0 | 0 | 0 | 0 | 354,366,856 |
| TOTAL | 82,817,902 | 6,185,173,916 | 58,692,001 | 8,635,901,842 | 0 | 0 | 0 | 0 | 0 | 9,883,880,031 |

TABLE B-19. Total Transportation Charge for Each Contractor

(in dollars)

Sheet 1 of 4

| Calendar Year | NORTH BAY AREA | | | SOUTH BAY AREA | | | | CENTRAL COASTAL AREA | | |
|------------------|--------------------------|------------------------|-------------|--|--|--|---------------|--|--------------------------------------|---------------|
| | Napa County FC&WCD | Solano County WA | Total | Alameda County FC&WCD, Zone 7 | Alameda County Water District | Santa Clara Valley Water District | Total | San Luis Obispo County FC&WCD | Santa Barbara County FC&WCD | Total |
| | [1] | [2] | [3] | [4] | [5] | [6] | [7] | [8] | [9] | [10] |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1962 | 0 | 0 | 0 | 11,750 | 43,787 | 21,132 | 76,669 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 199,673 | 190,236 | 447,594 | 837,503 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 263,210 | 277,398 | 621,174 | 1,161,782 | 6,694 | 21,659 | 28,353 |
| 1965 | 0 | 0 | 0 | 373,722 | 404,239 | 1,157,791 | 1,935,753 | 13,751 | 36,017 | 49,768 |
| 1966 | 18,057 | 0 | 18,057 | 419,362 | 421,628 | 1,412,600 | 2,253,589 | 26,516 | 61,329 | 87,845 |
| 1967 | 41,560 | 0 | 41,560 | 538,988 | 498,337 | 1,685,708 | 2,723,033 | 56,451 | 118,225 | 174,675 |
| 1968 | 128,588 | 0 | 128,588 | 663,618 | 603,365 | 1,984,791 | 3,251,775 | 115,927 | 229,740 | 345,667 |
| 1969 | 254,662 | 0 | 254,662 | 787,062 | 539,211 | 2,082,792 | 3,409,066 | 185,118 | 358,783 | 543,901 |
| 1970 | 277,493 | 0 | 277,493 | 822,795 | 532,434 | 2,202,293 | 3,557,522 | 200,110 | 387,595 | 587,705 |
| 1971 | 227,419 | 0 | 227,419 | 787,859 | 551,979 | 2,169,421 | 3,509,260 | 202,373 | 392,830 | 595,203 |
| 1972 | 224,922 | 0 | 224,922 | 829,525 | 678,385 | 2,319,944 | 3,827,854 | 209,016 | 406,506 | 615,522 |
| 1973 | 221,035 | 31,353 | 252,388 | 794,761 | 549,258 | 2,338,141 | 3,682,161 | 206,516 | 402,639 | 609,155 |
| 1974 | 240,442 | 32,924 | 273,366 | 818,553 | 564,459 | 2,505,879 | 3,888,892 | 208,503 | 407,005 | 615,508 |
| 1975 | 237,400 | 36,276 | 273,676 | 868,427 | 605,595 | 2,409,443 | 3,883,465 | 225,853 | 439,787 | 665,639 |
| 1976 | 271,231 | 40,819 | 312,050 | 959,201 | 734,676 | 2,500,026 | 4,193,903 | 228,933 | 447,212 | 676,146 |
| 1977 | 293,565 | 45,078 | 338,643 | 923,385 | 713,422 | 2,475,917 | 4,112,724 | 238,656 | 468,632 | 707,288 |
| 1978 | 273,807 | 49,159 | 322,966 | 978,736 | 692,451 | 2,785,503 | 4,456,690 | 245,286 | 484,166 | 729,452 |
| 1979 | 289,415 | 53,320 | 342,735 | 1,043,918 | 736,221 | 2,813,091 | 4,593,230 | 243,065 | 483,342 | 726,406 |
| 1980 | 310,779 | 67,724 | 378,502 | 1,161,947 | 866,233 | 3,027,715 | 5,055,895 | 269,813 | 536,977 | 806,790 |
| 1981 | 347,710 | 87,377 | 435,087 | 1,127,631 | 879,216 | 2,917,088 | 4,923,935 | 288,950 | 586,152 | 875,102 |
| 1982 | 438,260 | 106,881 | 545,141 | 1,165,535 | 850,343 | 3,261,611 | 5,277,490 | 290,002 | 582,655 | 872,657 |
| 1983 | 354,703 | 151,207 | 505,911 | 1,177,108 | 900,223 | 3,794,952 | 5,872,284 | 319,167 | 633,079 | 952,246 |
| 1984 | 467,232 | 224,170 | 691,403 | 1,469,258 | 1,097,338 | 5,737,303 | 8,303,898 | 351,573 | 695,455 | 1,047,028 |
| 1985 | 735,929 | 364,186 | 1,100,115 | 1,919,712 | 1,789,224 | 6,551,041 | 10,259,978 | 394,545 | 776,889 | 1,171,434 |
| 1986 | 1,084,468 | 692,256 | 1,776,724 | 1,746,932 | 1,528,587 | 6,862,724 | 10,138,243 | 385,497 | 762,577 | 1,148,074 |
| 1987 | 1,773,371 | 1,558,749 | 3,332,120 | 2,236,807 | 2,011,731 | 6,674,848 | 10,923,386 | 385,240 | 812,199 | 1,197,439 |
| 1988 | 2,231,006 | 2,333,097 | 4,564,103 | 2,238,454 | 2,210,377 | 6,368,341 | 10,817,171 | 420,102 | 978,488 | 1,398,590 |
| 1989 | 2,396,678 | 3,325,671 | 5,722,349 | 2,154,770 | 1,871,882 | 5,916,199 | 9,942,851 | 414,171 | 1,162,567 | 1,576,738 |
| 1990 | 2,745,521 | 3,432,532 | 6,178,053 | 2,574,078 | 2,261,764 | 6,667,922 | 11,503,765 | 487,553 | 1,234,234 | 1,721,787 |
| 1991 | 2,748,016 | 3,681,509 | 6,429,525 | 1,753,702 | 1,621,035 | 4,527,400 | 7,902,136 | 491,359 | 1,476,188 | 1,967,547 |
| 1992 | 2,553,906 | 3,528,155 | 6,082,061 | 2,074,873 | 2,003,168 | 5,385,315 | 9,463,357 | 550,978 | 1,490,922 | 2,041,900 |
| 1993 | 2,592,266 | 3,503,436 | 6,095,702 | 2,880,112 | 2,011,060 | 6,511,316 | 11,402,488 | 610,046 | 1,675,150 | 2,285,196 |
| 1994 | 2,717,705 | 3,536,653 | 6,254,358 | 2,906,860 | 2,642,296 | 7,313,960 | 12,863,116 | 767,812 | 2,472,977 | 3,240,789 |
| 1995 | 2,648,648 | 3,509,127 | 6,157,775 | 3,035,219 | 2,288,863 | 5,893,109 | 11,217,191 | 995,188 | 4,975,940 | 5,971,129 |
| 1996 | 2,698,584 | 3,890,907 | 6,589,491 | 2,584,359 | 2,137,277 | 6,674,929 | 11,396,565 | 1,837,045 | 13,762,994 | 15,600,038 |
| 1997 | 2,641,264 | 3,630,366 | 6,271,631 | 2,657,614 | 2,007,165 | 6,550,904 | 11,215,683 | 2,294,408 | 21,854,824 | 24,149,233 |
| 1998 | 2,538,137 | 3,477,253 | 6,015,390 | 2,264,009 | 2,063,998 | 6,295,482 | 10,623,489 | 2,976,340 | 26,684,493 | 29,668,833 |
| 1999 | 2,682,299 | 3,830,466 | 6,512,764 | 2,867,496 | 2,431,974 | 8,324,558 | 13,624,028 | 3,023,611 | 27,452,170 | 30,475,781 |
| 2000 | 2,832,337 | 4,306,263 | 7,138,600 | 3,910,640 | 2,301,580 | 7,022,367 | 13,234,588 | 2,960,868 | 27,896,646 | 30,857,514 |
| 2001 | 3,348,500 | 4,914,918 | 8,263,418 | 7,405,804 | 2,806,307 | 8,478,000 | 18,690,111 | 3,516,887 | 30,060,303 | 33,577,190 |
| 2002 | 3,555,102 | 5,049,946 | 8,605,048 | 10,854,964 | 2,782,654 | 9,933,831 | 23,571,448 | 3,229,434 | 29,678,180 | 32,907,615 |
| 2003 | 3,671,379 | 5,403,302 | 9,074,681 | 7,532,137 | 2,521,833 | 8,769,060 | 18,823,030 | 3,318,436 | 29,954,345 | 33,272,781 |
| 2004 | 4,149,263 | 5,630,486 | 9,779,749 | 7,737,131 | 2,828,410 | 8,244,797 | 16,810,338 | 3,335,659 | 30,395,681 | 33,731,341 |
| 2005 | 3,503,393 | 5,131,453 | 8,634,846 | 5,727,511 | 2,969,312 | 8,984,207 | 17,681,031 | 3,459,157 | 30,481,580 | 33,940,737 |
| 2006 | 3,410,392 | 4,632,949 | 8,043,340 | 5,567,098 | 2,885,042 | 8,925,449 | 17,377,589 | 3,344,132 | 30,423,969 | 33,768,101 |
| 2007 | 3,867,023 | 5,788,395 | 9,655,417 | 6,660,786 | 3,416,891 | 10,233,156 | 20,310,832 | 3,630,014 | 32,629,415 | 36,259,431 |
| 2008 | 4,328,287 | 5,124,344 | 9,452,631 | 7,234,040 | 3,551,543 | 10,026,500 | 20,812,083 | 4,106,798 | 33,672,525 | 37,779,323 |
| 2009 | 4,899,310 | 4,941,038 | 9,840,347 | 6,265,068 | 3,199,400 | 9,962,135 | 19,426,603 | 4,028,831 | 32,822,117 | 36,850,949 |
| 2010 | 6,053,715 | 6,134,760 | 12,188,475 | 8,721,015 | 3,608,684 | 11,477,713 | 23,807,412 | 4,497,323 | 35,394,671 | 39,891,995 |
| 2011 | 6,432,108 | 6,437,425 | 12,869,533 | 9,661,769 | 4,484,769 | 13,829,591 | 27,976,129 | 4,386,676 | 39,136,230 | 43,522,905 |
| 2012 | 6,196,340 | 6,166,450 | 12,362,790 | 9,587,321 | 4,589,574 | 13,431,423 | 27,608,318 | 4,049,348 | 36,361,032 | 40,410,380 |
| 2013 | 5,371,170 | 5,619,529 | 10,990,698 | 8,217,764 | 3,989,445 | 11,307,589 | 23,514,799 | 4,091,906 | 36,585,125 | 40,677,031 |
| 2014 | 5,297,994 | 5,627,207 | 10,925,201 | 7,886,910 | 3,771,296 | 10,828,755 | 22,486,960 | 4,139,989 | 36,035,328 | 40,175,317 |
| 2015 | 5,636,922 | 5,837,692 | 11,474,614 | 8,706,457 | 4,115,733 | 11,822,189 | 24,644,379 | 6,160,911 | 36,025,082 | 42,185,993 |
| 2016 | 5,629,290 | 5,860,662 | 11,489,952 | 8,700,686 | 4,102,262 | 11,691,178 | 24,494,126 | 6,157,927 | 36,137,713 | 42,295,640 |
| 2017 | 5,617,132 | 5,884,938 | 11,502,070 | 8,607,924 | 4,059,627 | 11,549,377 | 24,216,928 | 6,119,787 | 36,188,607 | 42,308,394 |
| 2018 | 5,531,331 | 5,902,689 | 11,434,020 | 8,607,386 | 4,081,814 | 11,582,749 | 24,271,949 | 6,096,599 | 36,269,423 | 42,366,022 |
| 2019 | 5,495,334 | 5,926,357 | 11,421,691 | 8,460,964 | 4,022,586 | 11,422,714 | 23,906,265 | 6,066,321 | 36,254,340 | 42,320,662 |
| 2020 | 5,505,514 | 5,950,686 | 11,456,201 | 8,445,890 | 4,017,056 | 11,407,405 | 23,870,352 | 6,074,707 | 36,310,621 | 42,385,327 |
| 2021 | 5,521,663 | 5,977,984 | 11,499,647 | 8,514,975 | 4,051,606 | 11,499,722 | 24,066,303 | 6,108,765 | 36,414,156 | 42,522,920 |
| 2022 | 5,533,478 | 6,001,960 | 11,535,438 | 8,537,906 | 4,061,811 | 11,524,056 | 24,123,773 | 6,117,506 | 36,471,728 | 42,589,234 |
| 2023 | 5,542,984 | 5,990,747 | 11,533,731 | 8,581,803 | 4,083,544 | 11,577,598 | 24,242,945 | 6,127,818 | 36,533,273 | 42,661,091 |
| 2024 | 5,551,660 | 6,012,444 | 11,564,104 | 8,561,967 | 4,071,438 | 11,546,181 | 24,179,586 | 6,119,061 | 36,560,600 | 42,679,661 |
| 2025 | 5,551,020 | 6,030,357 | 11,581,377 | 8,616,302 | 4,098,611 | 11,614,483 | 24,329,396 | 6,128,675 | 36,621,718 | 42,750,393 |
| 2026 | 5,560,548 | 6,051,193 | 11,611,740 | 8,719,435 | 4,150,346 | 11,749,762 | 24,619,543 | 6,163,981 | 36,729,063 | 42,893,044 |
| 2027 | 5,572,563 | 6,072,846 | 11,645,409 | 8,660,376 | 4,117,769 | 11,663,798 | 24,441,943 | 6,150,786 | 36,746,855 | 42,897,641 |
| 2028 | 5,583,061 | 6,094,067 | 11,677,128 | 8,739,224 | 4,156,751 | 11,764,841 | 24,660,816 | 6,172,895 | 36,829,413 | 43,002,308 |
| 2029 | 5,594,060 | 6,115,873 | 11,709,933 | 8,714,646 | 4,142,008 | 11,726,276 | 24,582,930 | 6,170,290 | 36,867,606 | 43,037,896 |
| 2030 | 5,597,157 | 6,126,223 | 11,723,380 | 8,766,084 | 4,166,903 | 11,791,579 | 24,724,565 | 6,187,787 | 36,941,864 | 43,129,651 |
| 2031 | 5,597,092 | 6,131,866 | 11,728,958 | 8,844,435 | 4,206,336 | 11,892,039 | 24,942,810 | 6,217,362 | 37,028,833 | 43,246,195 |
| 2032 | 5,599,299 | 6,137,899 | 11,737,198 | 8,818,201 | 4,189,903 | 11,853,339 | 24,861,444 | 6,209,042 | 37,066,788 | 43,275,830 |
| 2033 | 5,582,904 | 6,117,703 | 11,700,608 | 8,935,790 | 4,250,671 | 12,006,612 | 25,193,073 | 6,254,070 | 37,200,200 | 43,454,271 |
| 2034 | 5,525,642 | 6,068,624 | 11,594,266 | 8,898,620 | 4,228,160 | 11,952,501 | 25,079,281 | 6,244,991 | 37,229,642 | 43,474,633 |
| 2035 | 5,393,516 | 5,950,155 | 11,343,671 | 8,837,301 | 4,195,917 | 11,863,774 | 24,896,992 | 6,238,507 | 37,264,723 | 43,503,230 |
| TOTAL | 223,344,558 | 252,372,083 | 475,716,641 | 347,327,356 | 181,088,427 | 546,146,706 | 1,074,562,489 | 205,549,415 | 1,376,971,793 | 1,582,521,208 |

TABLE B-19. Total Transportation Charge for Each Contractor

(in dollars)

Sheet 2 of 4

| Calendar Year | SAN JOAQUIN VALLEY AREA | | | | | | | | |
|------------------|--------------------------------------|---|---|--------------------------------|-------------------|-----------------------|-------------------------------|---|---------------|
| | Dudley Ridge Water District | Empire West Side Irrigation District | Future Contractor San Joaquin Valley | Kern County Water Agency | | County of Kings | Oak Flat Water District | Tulare Lake Basin Water Storage District | Total |
| | | | | Municipal and Industrial | Agri- cultural | | | | |
| | [11] | [12] | [13] | [14] | [15] | [16] | [17] | [18] | [19] |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 2,724 | 0 | 0 | 0 | 0 | 0 | 2,724 |
| 1965 | 0 | 0 | 6,027 | 73,544 | 0 | 0 | 0 | 0 | 79,571 |
| 1966 | 0 | 0 | 12,035 | 137,284 | 0 | 0 | 0 | 0 | 149,319 |
| 1967 | 0 | 0 | 26,249 | 267,525 | 0 | 0 | 0 | 0 | 293,774 |
| 1968 | 184,621 | 8,908 | 54,573 | 445,315 | 1,544,475 | 13,767 | 11,594 | 209,005 | 2,472,257 |
| 1969 | 180,227 | 7,643 | 87,557 | 524,952 | 2,392,273 | 12,621 | 10,598 | 357,429 | 3,573,301 |
| 1970 | 202,245 | 14,410 | 94,656 | 573,846 | 2,915,112 | 12,786 | 13,135 | 294,001 | 4,120,191 |
| 1971 | 198,527 | 15,368 | 95,676 | 605,729 | 3,823,744 | 17,759 | 14,437 | 449,139 | 5,220,379 |
| 1972 | 221,096 | 16,236 | 98,769 | 631,452 | 4,994,595 | 15,216 | 20,736 | 1,082,641 | 7,080,742 |
| 1973 | 203,688 | 12,307 | 97,531 | 639,086 | 4,927,752 | 15,480 | 11,744 | 409,647 | 6,317,234 |
| 1974 | 283,680 | 12,276 | 98,440 | 698,081 | 5,230,650 | 15,586 | 12,828 | 598,823 | 6,950,365 |
| 1975 | 350,854 | 13,221 | 106,683 | 715,440 | 6,353,193 | 16,616 | 14,513 | 729,793 | 8,300,313 |
| 1976 | 305,665 | 13,767 | 108,064 | 774,124 | 6,707,527 | 16,990 | 16,189 | 565,639 | 8,507,965 |
| 1977 | 267,634 | 10,877 | 112,534 | 797,692 | 6,882,980 | 18,453 | 13,969 | 512,482 | 8,616,620 |
| 1978 | 356,537 | 4,441 | 115,500 | 890,777 | 8,337,152 | 18,918 | 18,011 | 506,223 | 10,247,558 |
| 1979 | 386,638 | 13,614 | 114,232 | 896,026 | 9,463,403 | 20,198 | 24,944 | 955,225 | 11,874,280 |
| 1980 | 407,815 | 11,964 | 125,929 | 888,723 | 10,022,104 | 20,745 | 24,341 | 739,606 | 12,241,227 |
| 1981 | 471,306 | 29,805 | 134,147 | 1,079,139 | 11,468,567 | 24,935 | 22,991 | 911,038 | 14,141,929 |
| 1982 | 465,815 | 12,955 | 135,036 | 1,004,492 | 12,302,288 | 22,951 | 22,459 | 748,526 | 14,714,522 |
| 1983 | 639,050 | 14,549 | 149,180 | 1,027,082 | 15,511,739 | 39,967 | 29,202 | 428,365 | 17,839,133 |
| 1984 | 911,658 | 14,963 | 164,483 | 2,063,001 | 23,639,449 | 54,424 | 59,705 | 785,940 | 27,693,623 |
| 1985 | 1,100,137 | 87,524 | 184,883 | 2,350,412 | 27,947,666 | 69,479 | 70,236 | 2,172,087 | 33,982,424 |
| 1986 | 1,264,306 | 33,980 | 180,423 | 2,364,977 | 30,527,422 | 80,765 | 76,099 | 2,185,419 | 36,713,390 |
| 1987 | 1,122,814 | 50,775 | 179,850 | 2,804,592 | 29,314,788 | 78,014 | 74,347 | 2,244,514 | 35,869,693 |
| 1988 | 1,108,355 | 61,570 | 193,712 | 2,750,239 | 29,228,806 | 74,164 | 60,225 | 2,202,241 | 35,679,312 |
| 1989 | 1,143,805 | 49,252 | 187,891 | 2,435,448 | 29,291,691 | 67,045 | 68,692 | 2,445,708 | 35,689,532 |
| 1990 | 866,255 | 34,414 | 221,368 | 2,541,123 | 27,408,194 | 51,053 | 49,122 | 1,872,763 | 33,044,292 |
| 1991 | 583,916 | 23,319 | 220,258 | 2,055,047 | 17,607,586 | 27,925 | 26,891 | 1,233,328 | 21,778,271 |
| 1992 | 953,433 | 39,155 | 241,431 | 2,369,575 | 25,905,707 | 55,791 | 50,945 | 1,910,468 | 31,526,505 |
| 1993 | 1,165,723 | 53,682 | 264,933 | 2,799,265 | 31,419,876 | 72,885 | 69,628 | 2,644,056 | 38,490,048 |
| 1994 | 1,020,813 | 43,808 | 306,333 | 2,808,608 | 29,295,687 | 60,455 | 57,395 | 2,119,986 | 35,713,086 |
| 1995 | 1,517,501 | 46,666 | 304,270 | 3,499,388 | 36,419,242 | 88,870 | 80,218 | 2,774,096 | 44,730,252 |
| 1996 | 1,347,116 | 48,298 | 389,175 | 3,559,914 | 36,403,415 | 86,087 | 73,866 | 4,319,987 | 46,227,858 |
| 1997 | 1,388,645 | 25,455 | 276,653 | 3,107,537 | 32,574,241 | 36,710 | 68,726 | 1,674,064 | 39,152,030 |
| 1998 | 1,232,528 | 34,410 | 381,817 | 2,654,204 | 29,322,840 | 41,830 | 60,021 | 1,804,308 | 35,531,958 |
| 1999 | 1,220,021 | 55,476 | 366,546 | 3,046,627 | 31,259,880 | 75,083 | 65,014 | 4,152,165 | 40,240,812 |
| 2000 | 1,060,484 | 37,912 | 303,274 | 2,545,766 | 26,140,056 | 61,636 | 54,563 | 2,774,311 | 32,978,002 |
| 2001 | 1,749,390 | 63,169 | 328,166 | 2,520,259 | 33,775,387 | 80,367 | 101,557 | 3,070,987 | 41,689,281 |
| 2002 | 1,319,530 | 43,731 | 321,653 | 2,969,892 | 28,324,611 | 73,448 | 77,924 | 2,553,716 | 35,684,505 |
| 2003 | 1,391,842 | 48,839 | 342,603 | 3,342,692 | 31,289,277 | 89,912 | 79,349 | 2,879,546 | 39,464,060 |
| 2004 | 1,448,222 | 78,128 | 345,076 | 3,735,426 | 30,459,728 | 234,137 | 81,901 | 2,391,809 | 38,774,427 |
| 2005 | 2,028,490 | 87,647 | 355,726 | 3,228,975 | 41,191,936 | 416,699 | 81,110 | 3,426,214 | 50,816,798 |
| 2006 | 1,761,515 | 73,916 | 302,363 | 3,246,629 | 37,144,626 | 248,844 | 78,075 | 2,754,476 | 45,610,444 |
| 2007 | 1,628,444 | 68,224 | 351,200 | 3,033,935 | 35,221,435 | 230,483 | 80,071 | 2,895,597 | 43,509,389 |
| 2008 | 1,503,672 | 61,847 | 476,849 | 3,400,702 | 34,723,594 | 245,596 | 79,852 | 2,413,122 | 42,905,235 |
| 2009 | 1,223,226 | 50,995 | 451,378 | 2,171,426 | 31,170,677 | 194,519 | 64,015 | 2,044,911 | 37,371,147 |
| 2010 | 1,734,686 | 72,948 | 484,141 | 4,100,723 | 39,891,485 | 275,094 | 98,831 | 2,570,193 | 49,228,101 |
| 2011 | 1,978,584 | 101,880 | 471,458 | 5,378,415 | 46,551,715 | 352,452 | 125,273 | 3,340,749 | 58,300,526 |
| 2012 | 2,021,556 | 101,764 | 465,078 | 5,263,622 | 45,937,788 | 350,502 | 124,255 | 3,337,622 | 57,602,188 |
| 2013 | 1,804,455 | 89,998 | 481,153 | 4,724,051 | 42,240,090 | 315,793 | 104,954 | 2,988,692 | 52,749,186 |
| 2014 | 1,730,520 | 86,611 | 483,761 | 4,566,517 | 40,899,905 | 305,002 | 102,187 | 2,888,330 | 51,062,833 |
| 2015 | 1,586,143 | 83,755 | 485,443 | 4,361,276 | 40,317,357 | 296,210 | 98,065 | 2,803,725 | 50,031,975 |
| 2016 | 1,599,492 | 84,601 | 483,378 | 4,340,940 | 40,701,689 | 298,851 | 98,765 | 2,828,864 | 50,436,580 |
| 2017 | 1,566,962 | 82,509 | 473,106 | 4,107,570 | 39,990,702 | 292,385 | 95,717 | 2,766,932 | 49,375,882 |
| 2018 | 1,644,781 | 87,532 | 454,403 | 4,227,807 | 41,684,413 | 298,547 | 103,491 | 2,915,893 | 51,416,867 |
| 2019 | 1,600,838 | 84,708 | 449,900 | 4,033,288 | 40,811,672 | 289,044 | 98,726 | 2,832,238 | 50,200,413 |
| 2020 | 1,472,436 | 84,632 | 452,095 | 3,998,354 | 40,899,047 | 288,533 | 97,894 | 2,830,074 | 50,123,064 |
| 2021 | 1,496,592 | 86,173 | 455,033 | 4,045,385 | 41,415,789 | 293,174 | 100,345 | 2,875,850 | 50,768,341 |
| 2022 | 1,497,622 | 86,212 | 458,499 | 4,036,790 | 41,501,568 | 293,219 | 99,996 | 2,877,064 | 50,850,970 |
| 2023 | 1,512,626 | 87,270 | 462,197 | 4,079,770 | 41,876,001 | 296,452 | 101,591 | 2,908,497 | 51,324,404 |
| 2024 | 1,489,708 | 85,681 | 465,841 | 4,003,337 | 41,448,756 | 291,490 | 98,524 | 2,861,483 | 50,744,820 |
| 2025 | 1,511,998 | 87,278 | 469,485 | 4,071,947 | 41,965,067 | 296,392 | 101,226 | 2,908,911 | 51,412,303 |
| 2026 | 1,553,106 | 90,072 | 473,465 | 4,192,745 | 42,791,619 | 305,026 | 106,377 | 2,991,790 | 52,504,200 |
| 2027 | 1,510,021 | 87,031 | 477,114 | 4,054,291 | 42,036,052 | 295,542 | 99,978 | 2,901,727 | 51,461,756 |
| 2028 | 1,540,067 | 89,074 | 479,013 | 4,141,496 | 42,651,945 | 301,784 | 103,701 | 2,962,391 | 52,269,471 |
| 2029 | 1,516,608 | 87,403 | 483,075 | 4,063,219 | 42,262,519 | 296,541 | 100,050 | 2,912,914 | 51,722,329 |
| 2030 | 1,531,935 | 88,432 | 487,207 | 4,103,770 | 42,590,877 | 299,669 | 101,855 | 2,943,512 | 52,147,257 |
| 2031 | 1,571,039 | 91,090 | 490,085 | 4,210,464 | 43,540,618 | 307,512 | 105,638 | 3,022,361 | 53,338,808 |
| 2032 | 1,533,755 | 88,460 | 494,584 | 4,084,312 | 42,686,506 | 299,377 | 101,510 | 2,944,478 | 52,232,982 |
| 2033 | 1,590,470 | 92,335 | 498,802 | 4,262,018 | 44,038,541 | 311,274 | 107,206 | 3,059,427 | 53,960,072 |
| 2034 | 1,555,642 | 89,874 | 502,784 | 4,135,506 | 43,247,935 | 303,499 | 103,289 | 2,986,554 | 52,925,084 |
| 2035 | 1,525,379 | 87,728 | 506,702 | 4,042,695 | 42,970,820 | 296,618 | 97,069 | 2,923,035 | 52,450,046 |
| TOTAL | 79,864,260 | 3,814,547 | 21,805,656 | 196,706,275 | 2,006,835,847 | 11,049,190 | 4,747,751 | 149,426,707 | 2,474,250,232 |

TABLE B-19. Total Transportation Charge for Each Contractor

| Calendar Year | (in dollars) | | | | | | | | | | Sheet 3 of 4 | |
|----------------------|--|------------------------------------|--|--|---------------------------|---|---------------------------|-------------------------------|---|--|--------------|--|
| | SOUTHERN CALIFORNIA AREA | | | | | | | | | | | |
| | Antelope Valley- East Kern Water Agency | Castaic Lake Water Agency | Coachella Valley Water District | Crestline - Lake Arrowhead Water Agency | Desert Water Agency | Littlerock Creek Irrigation District | Mojave Water Agency | Palmdale Water District | San Bernardino Valley Municipal Water District | San Gabriel Valley Municipal Water District | | |
| | [20] | [21] | [22] | [23] | [24] | [25] | [26] | [27] | [28] | [29] | | |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 1963 | 33,841 | 0 | 0 | 0 | 725 | 0 | 0 | 0 | 51,711 | 0 | | |
| 1964 | 63,637 | 27,438 | 19,535 | 4,368 | 38,197 | 1,142 | 29,747 | 8,202 | 82,782 | 34,973 | | |
| 1965 | 119,942 | 52,989 | 34,336 | 7,191 | 42,687 | 2,081 | 52,687 | 15,217 | 135,023 | 35,333 | | |
| 1966 | 218,209 | 101,232 | 62,456 | 12,474 | 76,861 | 3,752 | 94,947 | 27,670 | 232,426 | 61,445 | | |
| 1967 | 422,183 | 210,746 | 121,230 | 23,464 | 148,792 | 7,282 | 184,188 | 54,006 | 433,210 | 115,536 | | |
| 1968 | 744,563 | 478,175 | 218,583 | 41,496 | 265,090 | 12,866 | 328,151 | 95,438 | 781,930 | 208,864 | | |
| 1969 | 1,073,513 | 724,439 | 334,003 | 61,208 | 393,906 | 18,688 | 487,115 | 138,023 | 1,205,471 | 321,659 | | |
| 1970 | 1,397,545 | 904,338 | 470,279 | 89,673 | 552,058 | 25,223 | 673,155 | 184,783 | 1,777,649 | 467,431 | | |
| 1971 | 1,731,854 | 1,088,202 | 627,141 | 128,321 | 753,842 | 31,827 | 907,578 | 231,214 | 2,537,458 | 659,218 | | |
| 1972 | 2,052,803 | 1,307,136 | 777,625 | 181,162 | 971,249 | 42,393 | 1,167,785 | 274,527 | 3,387,842 | 864,867 | | |
| 1973 | 2,144,291 | 1,323,225 | 919,997 | 183,667 | 1,184,434 | 43,472 | 1,233,075 | 287,241 | 3,970,608 | 946,446 | | |
| 1974 | 2,208,324 | 1,382,669 | 938,635 | 193,237 | 1,211,939 | 45,201 | 1,265,997 | 291,996 | 3,997,546 | 989,818 | | |
| 1975 | 2,385,867 | 1,450,741 | 983,349 | 205,992 | 1,280,531 | 48,479 | 1,334,196 | 304,204 | 4,158,104 | 1,088,088 | | |
| 1976 | 2,739,598 | 1,446,107 | 1,031,841 | 215,036 | 1,356,609 | 51,452 | 1,377,377 | 313,608 | 4,298,577 | 1,141,338 | | |
| 1977 | 2,682,772 | 1,515,207 | 929,295 | 225,984 | 1,194,634 | 47,338 | 1,449,714 | 329,288 | 4,552,801 | 1,196,952 | | |
| 1978 | 3,000,670 | 1,600,032 | 1,111,368 | 230,990 | 1,470,373 | 47,108 | 1,450,198 | 321,604 | 4,459,127 | 1,208,453 | | |
| 1979 | 3,554,338 | 1,634,652 | 1,180,601 | 237,905 | 1,568,887 | 48,384 | 1,578,259 | 332,394 | 4,421,335 | 1,152,106 | | |
| 1980 | 4,101,051 | 1,716,333 | 1,271,619 | 259,351 | 1,730,367 | 53,338 | 1,698,197 | 360,382 | 4,834,599 | 1,269,177 | | |
| 1981 | 4,431,739 | 1,969,971 | 1,355,250 | 271,128 | 1,850,501 | 77,794 | 1,821,967 | 391,786 | 5,223,096 | 1,357,401 | | |
| 1982 | 3,994,164 | 2,061,645 | 1,403,081 | 280,261 | 1,935,875 | 55,949 | 2,017,383 | 406,809 | 5,409,792 | 1,564,903 | | |
| 1983 | 5,185,039 | 2,323,885 | 1,997,245 | 333,027 | 2,880,651 | 69,370 | 2,092,643 | 494,603 | 6,019,822 | 1,556,367 | | |
| 1984 | 7,221,055 | 3,365,588 | 3,084,108 | 445,283 | 4,607,726 | 75,761 | 2,321,597 | 553,232 | 7,048,308 | 2,331,555 | | |
| 1985 | 8,936,560 | 3,749,997 | 3,882,225 | 540,331 | 5,882,868 | 79,219 | 2,432,639 | 758,960 | 7,739,192 | 2,378,093 | | |
| 1986 | 8,835,617 | 4,317,598 | 4,308,567 | 577,416 | 6,570,864 | 102,386 | 2,542,210 | 999,968 | 7,856,385 | 3,047,434 | | |
| 1987 | 8,852,462 | 4,158,252 | 4,164,429 | 604,923 | 6,418,502 | 121,795 | 2,574,937 | 1,026,303 | 9,223,407 | 3,033,831 | | |
| 1988 | 8,327,711 | 4,221,564 | 4,163,551 | 615,940 | 6,481,799 | 124,654 | 2,629,654 | 779,724 | 9,504,046 | 2,828,684 | | |
| 1989 | 8,704,817 | 4,101,469 | 3,808,363 | 586,536 | 5,951,917 | 170,557 | 2,577,210 | 1,442,530 | 8,943,045 | 2,930,080 | | |
| 1990 | 9,993,291 | 4,541,888 | 4,487,596 | 620,333 | 7,013,831 | 289,335 | 2,774,532 | 1,639,730 | 9,793,777 | 3,677,786 | | |
| 1991 | 6,494,954 | 3,510,814 | 2,995,836 | 567,387 | 4,550,196 | 175,123 | 3,534,217 | 1,294,508 | 8,920,573 | 3,035,311 | | |
| 1992 | 8,596,710 | 4,468,373 | 3,068,316 | 470,101 | 4,667,611 | 121,321 | 4,336,003 | 1,129,477 | 8,572,065 | 2,979,755 | | |
| 1993 | 8,980,846 | 4,099,783 | 3,267,372 | 472,751 | 4,993,253 | 157,733 | 4,215,349 | 1,347,409 | 9,504,354 | 3,319,667 | | |
| 1994 | 11,167,923 | 4,711,991 | 3,313,427 | 554,582 | 5,065,774 | 225,795 | 5,208,983 | 1,698,886 | 10,207,695 | 4,076,345 | | |
| 1995 | 10,769,211 | 4,969,827 | 4,087,290 | 509,093 | 6,340,315 | 155,546 | 4,297,048 | 1,527,143 | 9,441,804 | 3,715,006 | | |
| 1996 | 11,138,131 | 5,157,902 | 7,025,467 | 553,160 | 11,183,555 | 150,598 | 4,364,415 | 1,867,098 | 9,867,876 | 3,807,043 | | |
| 1997 | 11,388,609 | 4,924,620 | 6,588,274 | 579,209 | 7,422,595 | 144,818 | 4,668,423 | 1,869,201 | 11,266,866 | 4,037,468 | | |
| 1998 | 9,907,223 | 4,553,083 | 5,663,545 | 546,572 | 5,928,049 | 146,059 | 5,704,509 | 1,473,923 | 11,191,194 | 3,320,716 | | |
| 1999 | 11,375,560 | 4,949,775 | 4,634,828 | 633,674 | 5,981,498 | 146,042 | 5,904,373 | 1,847,246 | 12,262,751 | 4,157,099 | | |
| 2000 | 10,488,538 | 6,804,237 | 3,057,737 | 570,297 | 4,327,354 | 115,324 | 5,709,604 | 1,441,840 | 11,876,656 | 3,242,410 | | |
| 2001 | 20,669,430 | 12,500,968 | 4,327,586 | 799,566 | 6,380,251 | 127,875 | 6,420,824 | 3,358,756 | 17,899,579 | 3,399,374 | | |
| 2002 | 11,957,288 | 9,889,779 | 3,525,051 | 760,381 | 5,132,752 | 109,920 | 5,550,282 | 2,740,213 | 18,788,806 | 4,790,098 | | |
| 2003 | 13,361,693 | 10,766,814 | 3,639,473 | 733,786 | 5,347,262 | 116,199 | 7,240,963 | 2,282,957 | 17,268,430 | 4,973,932 | | |
| 2004 | 14,218,364 | 12,169,733 | 4,316,456 | 833,218 | 5,384,253 | 125,078 | 7,353,237 | 2,520,929 | 21,590,904 | 4,412,514 | | |
| 2005 | 14,594,235 | 10,842,442 | 17,814,282 | 654,960 | 10,289,121 | 114,388 | 7,121,628 | 2,566,933 | 19,580,341 | 4,658,207 | | |
| 2006 | 16,127,955 | 10,135,423 | 27,515,262 | 637,871 | 9,944,082 | 122,926 | 9,883,656 | 2,501,458 | 19,337,043 | 4,702,245 | | |
| 2007 | 19,359,101 | 13,546,921 | 25,949,533 | 882,717 | 9,326,125 | 124,242 | 13,641,536 | 4,005,845 | 25,902,402 | 3,800,230 | | |
| 2008 | 17,100,413 | 15,482,448 | 25,743,661 | 892,478 | 10,354,252 | 137,258 | 12,024,578 | 4,077,339 | 25,904,252 | 4,835,772 | | |
| 2009 | 14,451,126 | 12,800,949 | 22,860,703 | 839,471 | 7,998,052 | 132,418 | 11,435,372 | 3,660,652 | 24,909,690 | 5,206,887 | | |
| 2010 | 28,939,940 | 16,553,688 | 32,682,135 | 1,812,080 | 11,899,494 | 333,750 | 14,100,825 | 4,458,622 | 32,584,060 | 6,473,461 | | |
| 2011 | 21,571,770 | 13,647,028 | 32,961,470 | 1,520,406 | 11,619,179 | 590,037 | 26,100,013 | 5,506,342 | 39,787,662 | 6,893,782 | | |
| 2012 | 20,277,377 | 13,218,271 | 38,478,207 | 1,399,020 | 13,263,978 | 543,726 | 22,783,089 | 4,919,020 | 38,056,896 | 7,033,920 | | |
| 2013 | 18,929,654 | 12,309,537 | 36,512,307 | 1,336,755 | 11,971,642 | 489,834 | 21,308,234 | 4,444,558 | 35,351,453 | 6,254,184 | | |
| 2014 | 18,421,359 | 12,136,941 | 33,961,043 | 1,296,506 | 10,827,719 | 460,251 | 20,289,558 | 4,170,913 | 33,606,502 | 7,629,588 | | |
| 2015 | 26,557,274 | 18,371,499 | 41,376,248 | 1,572,047 | 13,755,822 | 441,909 | 20,426,339 | 4,000,941 | 32,834,323 | 7,407,776 | | |
| 2016 | 27,050,729 | 18,707,982 | 42,033,666 | 1,595,458 | 13,981,092 | 449,932 | 20,842,538 | 4,076,455 | 33,223,933 | 7,517,382 | | |
| 2017 | 25,701,951 | 18,110,576 | 40,738,774 | 1,535,096 | 13,434,463 | 427,850 | 19,968,461 | 3,875,543 | 32,213,515 | 7,230,239 | | |
| 2018 | 27,045,761 | 18,538,121 | 42,050,261 | 1,593,663 | 13,961,864 | 449,467 | 20,940,429 | 4,079,485 | 33,165,912 | 7,496,010 | | |
| 2019 | 25,839,261 | 17,746,141 | 40,751,293 | 1,534,547 | 13,447,142 | 429,449 | 20,083,198 | 3,897,982 | 32,160,509 | 7,213,928 | | |
| 2020 | 25,843,251 | 17,721,441 | 40,514,602 | 1,524,213 | 13,359,032 | 428,323 | 20,899,278 | 3,893,225 | 31,864,052 | 7,139,547 | | |
| 2021 | 25,752,049 | 17,623,829 | 40,140,187 | 1,498,328 | 13,220,942 | 425,773 | 20,769,243 | 3,875,757 | 31,409,187 | 7,027,033 | | |
| 2022 | 25,718,242 | 17,524,934 | 39,454,450 | 1,488,694 | 13,097,366 | 425,034 | 20,718,965 | 3,870,204 | 31,186,575 | 6,973,623 | | |
| 2023 | 25,823,764 | 17,625,390 | 38,890,009 | 1,492,363 | 13,025,988 | 426,673 | 20,816,464 | 3,885,714 | 31,180,090 | 6,968,625 | | |
| 2024 | 25,528,410 | 17,361,216 | 38,545,526 | 1,477,563 | 12,899,660 | 421,919 | 20,575,918 | 3,841,190 | 30,949,056 | 6,902,224 | | |
| 2025 | 25,620,120 | 17,467,687 | 38,669,904 | 1,482,682 | 12,954,045 | 423,455 | 20,685,931 | 3,855,026 | 31,072,319 | 6,932,028 | | |
| 2026 | 25,597,563 | 17,470,874 | 38,564,305 | 1,481,150 | 12,917,844 | 423,129 | 20,636,040 | 3,851,644 | 31,021,135 | 6,912,523 | | |
| 2027 | 25,683,424 | 17,513,056 | 38,674,936 | 1,486,001 | 12,965,749 | 424,587 | 20,731,704 | 3,864,647 | 31,139,280 | 6,940,060 | | |
| 2028 | 25,625,642 | 17,507,529 | 38,646,011 | 1,485,960 | 12,950,415 | 423,698 | 20,692,000 | 3,855,991 | 31,144,083 | 6,935,528 | | |
| 2029 | 25,648,974 | 17,498,653 | 38,745,654 | 1,488,394 | 12,986,456 | 424,139 | 20,734,511 | 3,859,643 | 31,249,167 | 6,958,988 | | |
| 2030 | 25,528,257 | 17,405,638 | 38,652,603 | 1,484,627 | 12,942,996 | 422,248 | 20,657,217 | 3,841,727 | 31,208,678 | 6,941,328 | | |
| 2031 | 26,353,115 | 17,713,650 | 39,570,272 | 1,523,586 | 13,309,535 | 435 | | | | | | |

TABLE B-19. Total Transportation Charge for Each Contractor

(in dollars)

Sheet 4 of 4

| Calendar Year | SOUTHERN CALIFORNIA AREA (continued) | | | | FEATHER RIVER AREA | | | | South Bay Area Future Contractor | GRAND TOTAL |
|------------------|--------------------------------------|---|---|----------------|----------------------------|-----------------------|----------------------------|-----------|---|----------------|
| | San Geronio Pass Water Agency | The Metropolitan Water District of Southern California | Ventura County Watershed Protection District | Total | City of Yuba City | County of Butte | Plumas County FC&WCD | Total | | |
| | [30] | [31] | [32] | [33] | [34] | [35] | [36] | [37] | [38] | [39] |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3,219 | 79,888 |
| 1963 | 0 | 690,539 | 0 | 776,816 | 0 | 0 | 0 | 0 | 12,626 | 1,626,945 |
| 1964 | 21,728 | 1,260,042 | 9,374 | 1,601,166 | 0 | 0 | 0 | 0 | 13,938 | 2,807,963 |
| 1965 | 21,859 | 2,179,810 | 17,760 | 2,716,916 | 0 | 0 | 405 | 405 | 28,937 | 4,811,350 |
| 1966 | 37,952 | 3,898,819 | 33,415 | 4,861,658 | 0 | 0 | 564 | 564 | 31,321 | 7,402,353 |
| 1967 | 71,260 | 7,691,085 | 68,133 | 9,551,114 | 0 | 0 | 562 | 562 | 47,718 | 12,832,436 |
| 1968 | 128,877 | 15,313,065 | 142,760 | 18,759,859 | 0 | 0 | 564 | 564 | 46,945 | 25,005,656 |
| 1969 | 198,704 | 23,145,744 | 215,144 | 28,317,617 | 0 | 0 | 3,190 | 3,190 | 52,963 | 36,154,699 |
| 1970 | 289,546 | 30,607,434 | 273,523 | 37,712,637 | 0 | 0 | 15,116 | 15,116 | 69,744 | 46,340,408 |
| 1971 | 409,205 | 39,946,463 | 342,325 | 49,394,650 | 0 | 0 | 15,996 | 15,996 | 55,532 | 59,018,437 |
| 1972 | 537,044 | 52,933,606 | 422,192 | 64,920,232 | 0 | 0 | 17,367 | 17,367 | 80,412 | 76,767,050 |
| 1973 | 587,814 | 57,257,279 | 435,541 | 70,517,089 | 0 | 0 | 17,328 | 17,328 | 54,219 | 81,449,573 |
| 1974 | 611,275 | 61,759,841 | 455,447 | 75,351,924 | 0 | 0 | 17,472 | 17,472 | 76,783 | 87,174,310 |
| 1975 | 644,464 | 66,739,819 | 478,284 | 81,102,117 | 0 | 0 | 18,400 | 18,400 | 84,547 | 94,328,158 |
| 1976 | 668,153 | 68,467,779 | 475,466 | 83,582,940 | 0 | 0 | 17,471 | 17,471 | 106,717 | 97,397,192 |
| 1977 | 696,350 | 66,216,668 | 506,941 | 81,543,944 | 0 | 0 | 18,227 | 18,227 | 98,618 | 95,436,063 |
| 1978 | 708,874 | 72,917,066 | 523,053 | 89,048,915 | 0 | 0 | 17,375 | 17,375 | 100,786 | 104,923,742 |
| 1979 | 712,699 | 72,648,617 | 526,278 | 89,596,455 | 0 | 0 | 20,573 | 20,573 | 119,352 | 107,273,030 |
| 1980 | 777,814 | 79,908,126 | 571,100 | 98,551,451 | 0 | 0 | 17,755 | 17,755 | 178,812 | 117,230,431 |
| 1981 | 805,858 | 91,241,966 | 636,261 | 111,434,720 | 0 | 0 | 21,188 | 21,188 | 185,347 | 132,017,306 |
| 1982 | 853,227 | 93,125,063 | 670,228 | 113,778,380 | 0 | 0 | 28,417 | 28,417 | 173,894 | 135,390,501 |
| 1983 | 951,954 | 101,767,502 | 803,439 | 126,475,548 | 0 | 0 | 19,271 | 19,271 | 220,926 | 151,885,319 |
| 1984 | 1,072,455 | 137,486,443 | 868,812 | 170,481,924 | 0 | 0 | 21,109 | 21,109 | 225,959 | 208,464,943 |
| 1985 | 1,120,667 | 172,895,309 | 908,613 | 211,304,673 | 0 | 0 | 20,233 | 20,233 | 340,322 | 258,179,179 |
| 1986 | 1,149,524 | 193,220,922 | 937,154 | 234,466,046 | 0 | 0 | 20,134 | 20,134 | 279,227 | 284,541,838 |
| 1987 | 1,171,823 | 178,743,184 | 907,876 | 221,091,725 | 0 | 0 | 19,736 | 19,736 | 345,116 | 272,779,215 |
| 1988 | 1,208,011 | 190,222,146 | 904,709 | 232,012,192 | 0 | 0 | 17,895 | 17,895 | 365,207 | 284,854,469 |
| 1989 | 1,194,715 | 193,213,771 | 932,440 | 234,557,450 | 0 | 0 | 19,153 | 19,153 | 422,329 | 287,930,401 |
| 1990 | 1,297,422 | 239,518,615 | 1,486,593 | 287,134,729 | 0 | 0 | 18,143 | 18,143 | 474,284 | 340,075,052 |
| 1991 | 1,354,718 | 179,928,886 | 1,140,954 | 217,503,476 | 0 | 0 | 21,012 | 21,012 | 214,683 | 255,816,651 |
| 1992 | 1,348,976 | 196,144,522 | 1,025,119 | 236,928,351 | 0 | 0 | 18,008 | 18,008 | 443,676 | 286,503,857 |
| 1993 | 1,507,337 | 169,470,518 | 1,067,967 | 212,404,338 | 0 | 0 | 20,993 | 20,993 | 599,571 | 271,298,336 |
| 1994 | 1,497,529 | 209,259,636 | 1,008,783 | 257,997,348 | 0 | 0 | 19,644 | 19,644 | 609,966 | 316,698,306 |
| 1995 | 1,520,392 | 173,396,660 | 1,061,154 | 221,790,488 | 0 | 0 | 20,272 | 20,272 | 534,971 | 290,422,078 |
| 1996 | 1,526,930 | 181,380,152 | 1,103,083 | 239,125,410 | 0 | 0 | 25,373 | 25,373 | 571,857 | 319,536,593 |
| 1997 | 1,730,097 | 186,712,246 | 1,216,389 | 242,548,814 | 0 | 0 | 24,815 | 24,815 | 428,638 | 323,790,844 |
| 1998 | 1,919,742 | 168,547,463 | 1,237,213 | 220,139,290 | 0 | 0 | 17,366 | 17,366 | 465,095 | 302,453,422 |
| 1999 | 2,154,698 | 190,548,360 | 1,255,763 | 245,851,667 | 0 | 0 | 17,366 | 17,366 | 571,365 | 337,293,783 |
| 2000 | 2,400,807 | 184,193,664 | 1,319,223 | 235,547,690 | 0 | 0 | 17,367 | 17,367 | 0 | 319,773,760 |
| 2001 | 3,320,535 | 376,060,682 | 1,619,546 | 456,884,972 | 0 | 0 | 17,368 | 17,368 | 0 | 559,122,340 |
| 2002 | 4,669,642 | 264,961,491 | 1,650,928 | 334,526,629 | 0 | 0 | 17,369 | 17,369 | 0 | 435,312,614 |
| 2003 | 5,942,492 | 294,046,763 | 1,677,612 | 367,398,377 | 0 | 0 | 20,763 | 20,763 | 0 | 468,053,692 |
| 2004 | 6,266,831 | 340,808,545 | 1,918,767 | 421,918,829 | 0 | 0 | 20,825 | 20,825 | 0 | 521,035,508 |
| 2005 | 6,527,827 | 313,058,833 | 1,399,914 | 409,223,111 | 0 | 0 | 20,822 | 20,822 | 0 | 520,317,344 |
| 2006 | 7,010,586 | 292,558,391 | 1,357,035 | 401,833,931 | 0 | 0 | 21,354 | 21,354 | 0 | 506,654,759 |
| 2007 | 7,920,117 | 376,008,322 | 1,906,164 | 502,373,256 | 0 | 0 | 21,325 | 21,325 | 0 | 612,129,649 |
| 2008 | 8,835,261 | 343,404,648 | 2,299,767 | 471,092,126 | 0 | 0 | 22,715 | 22,715 | 0 | 582,064,113 |
| 2009 | 9,040,010 | 298,053,911 | 2,060,920 | 413,450,161 | 0 | 0 | 18,895 | 18,895 | 0 | 516,958,101 |
| 2010 | 11,577,203 | 340,225,103 | 3,175,828 | 504,816,190 | 0 | 0 | 20,100 | 20,100 | 0 | 629,952,273 |
| 2011 | 10,846,532 | 505,381,720 | 5,035,295 | 681,461,237 | 0 | 0 | 21,844 | 21,844 | 0 | 824,152,175 |
| 2012 | 11,528,947 | 470,296,043 | 4,712,847 | 646,531,341 | 0 | 0 | 19,276 | 19,276 | 0 | 784,534,292 |
| 2013 | 12,317,757 | 430,011,382 | 4,147,548 | 595,384,844 | 0 | 0 | 19,227 | 19,227 | 0 | 723,335,785 |
| 2014 | 11,686,379 | 405,137,633 | 3,807,438 | 563,431,831 | 0 | 0 | 19,267 | 19,267 | 0 | 688,101,410 |
| 2015 | 11,603,365 | 416,812,917 | 3,790,277 | 598,950,737 | 0 | 0 | 18,903 | 18,903 | 0 | 727,306,600 |
| 2016 | 11,599,524 | 424,618,149 | 3,861,572 | 609,558,412 | 0 | 0 | 18,785 | 18,785 | 0 | 738,293,495 |
| 2017 | 11,589,696 | 409,626,757 | 3,722,326 | 588,175,246 | 0 | 0 | 18,830 | 18,830 | 0 | 715,597,350 |
| 2018 | 11,514,101 | 421,359,366 | 3,817,074 | 606,011,512 | 0 | 0 | 18,870 | 18,870 | 0 | 735,519,241 |
| 2019 | 11,474,174 | 403,554,875 | 3,639,141 | 581,771,640 | 0 | 0 | 16,264 | 16,264 | 0 | 709,636,934 |
| 2020 | 11,416,135 | 400,945,510 | 3,626,711 | 579,175,321 | 0 | 0 | 4,357 | 4,357 | 0 | 707,014,622 |
| 2021 | 11,356,922 | 396,591,319 | 3,598,219 | 573,288,788 | 0 | 0 | 3,550 | 3,550 | 0 | 702,149,549 |
| 2022 | 11,318,723 | 392,668,967 | 3,572,723 | 568,018,500 | 0 | 0 | 2,185 | 2,185 | 0 | 697,120,100 |
| 2023 | 11,307,485 | 393,207,651 | 3,591,326 | 568,241,543 | 0 | 0 | 2,203 | 2,203 | 0 | 698,005,917 |
| 2024 | 11,311,363 | 387,617,017 | 3,532,649 | 560,963,711 | 0 | 0 | 2,222 | 2,222 | 0 | 690,134,104 |
| 2025 | 11,299,646 | 389,610,021 | 3,552,491 | 563,625,356 | 0 | 0 | 2,240 | 2,240 | 0 | 693,701,066 |
| 2026 | 11,317,257 | 389,006,509 | 3,550,913 | 562,750,887 | 0 | 0 | 2,259 | 2,259 | 0 | 694,381,673 |
| 2027 | 11,341,819 | 390,069,311 | 3,558,851 | 564,393,424 | 0 | 0 | 2,277 | 2,277 | 0 | 694,842,450 |
| 2028 | 11,363,437 | 389,729,078 | 3,555,470 | 563,914,842 | 0 | 0 | 2,296 | 2,296 | 0 | 695,526,860 |
| 2029 | 11,389,968 | 389,977,050 | 3,551,849 | 564,513,446 | 0 | 0 | 2,315 | 2,315 | 0 | 695,568,849 |
| 2030 | 11,412,271 | 387,936,130 | 3,528,619 | 561,962,340 | 0 | 0 | 2,334 | 2,334 | 0 | 693,689,528 |
| 2031 | 11,425,765 | 396,363,807 | 3,594,815 | 574,576,857 | 0 | 0 | 2,354 | 2,354 | 0 | 707,835,982 |
| 2032 | 11,458,106 | 382,731,350 | 3,461,813 | 555,465,350 | 0 | 0 | 2,374 | 2,374 | 0 | 687,575,177 |
| 2033 | 11,477,259 | 396,987,086 | 3,597,371 | 575,899,797 | 0 | 0 | 2,395 | 2,395 | 0 | 710,210,216 |
| 2034 | 11,490,665 | 384,366,114 | 3,475,115 | 557,854,823 | 0 | 0 | 2,416 | 2,416 | 0 | 690,930,503 |
| 2035 | 11,509,349 | 399,179,728 | 3,604,848 | 579,461,511 | 0 | 0 | 2,437 | 2,437 | 0 | 711,657,886 |
| TOTAL | 392,377,645 | 17,547,571,014 | 138,542,291 | 23,989,382,633 | 0 | 0 | 1,018,874 | 1,018,874 | 8,735,622 | 29,606,187,700 |

TABLE B-20A: Calculation of Delta Water Rates

Calculation in accordance with Article 53(i) of the Monterey Amendment

(Values in millions of dollars [\$] or millions of acre-feet [AF] discounted to 2010 at 4.608 percent per annum)

| Procedure | Capital Cost Component | Minimum Operation, Maintenance, Power and Replacement Component (a) | Total Delta Water Rate |
|---|----------------------------|---|----------------------------|
| | [1] | [2] | [3] |
| Commencing in 2011 | | | |
| Total Costs of "Initial" Project Conservation Facilities to be Reimbursed and Project Water Entitlements during the Project Repayment Period. | \$5,970.78 (b) 355.62 AF | \$4,974.23 © 355.62 AF | \$10,945.01 355.62 AF |
| Less, Project Power Revenues to be Realized During the Project Repayment Period. | (2,885.35) | (1,059.94) | (\$3,945.29) |
| Less, Delta Water Charges Paid and Project Water Entitlements, Prior to 2011 | (2,208.18) (d) (294.43) AF | (2,250.80) (294.43) AF | (\$4,458.98) (294.43) AF |
| TOTAL | \$877.25 61.19 AF | \$1,663.49 61.19 AF | \$2,540.74 61.19 AF |
| Rate Applicable in 2011 | \$14.34 per acre-foot | \$27.19 per acre-foot | \$41.52 per acre-foot |

Calculation under original provisions, without the Monterey Amendment

(for Plumas County, and Empire)

| Procedure | Capital Cost Component | Minimum Operation, Maintenance, Power and Replacement Component (a) | Total Delta Water Rate |
|---|----------------------------|---|----------------------------|
| | [4] | [5] | [6] |
| Commencing in 2011 | | | |
| Total Costs of "Initial" Project Conservation Facilities to be Reimbursed and Project Water Entitlements during the Project Repayment Period. | \$5,956.67 (b) 355.62 AF | \$4,951.33 © 355.62 AF | \$10,908.00 355.62 AF |
| Less, Project Power Revenues to be Realized During the Project Repayment Period. | (2,885.35) | (1,059.94) | (\$3,945.29) |
| Less, Delta Water Charges Paid and Project Water Entitlements, Prior to 2011 | (2,208.18) (d) (294.43) AF | (2,250.80) (294.43) AF | (\$4,458.98) (294.43) AF |
| TOTAL | \$863.14 61.19 AF | \$1,640.59 61.19 AF | \$2,503.73 61.19 AF |
| Rate Applicable in 2011 | \$14.11 per acre-foot | \$26.81 per acre-foot | \$40.92 per acre-foot |

(a) Considering that all operating costs of Project Conservation Facilities will not vary with annual amounts of Project water delivered, and therefore are properly classified as "Minimum" OMP&R Costs. OMP&R costs exclude amounts for Conservation RAS.

(b) Including net credits of \$4,850,000 for settlements as to the magnitude of Project Capital costs incurred prior to December 31, 1960, and net credits of \$6,678,320 for settlement as to the magnitude of Project Capital costs incurred during the 1961 through 1978 period.

(c) Includes conservation power costs and credits at San Luis.

(d) Applying all Delta Water Charges paid prior to 1970 to reimburse Capital costs (the charge was not divided into components until 1970).

TABLE B-20B. Delta Water Rates by Facility

(in dollars per acre-foot)

| Item | Capital Cost Component | Minimum Operation, Maintenance, Power and Replacement Component | Total Delta Water Rate |
|--|------------------------|---|------------------------|
| | [1] | [2] | [3] |
| Initial Conservation Facilities | | | |
| Oroville Division | | | |
| Water Supply and power costs (a) | 58.18 | 38.88 | 97.06 |
| Less, Oroville Power Revenues | <u>-34.56</u> | <u>-17.32</u> | <u>-51.88</u> |
| Subtotal | 23.62 | 21.56 | 45.18 |
| Delta Facilities (b) | 17.36 | 23.96 | 41.32 |
| California Aqueduct, portion | | | |
| Reach 1 | 3.67 | 6.18 | 9.84 |
| Reach 2A | 2.17 | 0.85 | 3.01 |
| Reach 2B | 1.12 | 0.75 | 1.87 |
| Reach 3 | <u>0.78</u> | <u>0.34</u> | <u>1.11</u> |
| Subtotal | 7.73 | 8.11 | 15.84 |
| San Luis Facilities | 10.92 | 9.96 | 20.88 |
| Planning and preoperating costs through 2009 | 3.16 | 0.00 | 3.16 |
| 45,000 AF relinquished costs | 0.23 | 0.37 | 0.60 |
| Less, Capital Cost Credits | -1.53 | 0.00 | -1.53 |
| Less, Delta Water Charges paid prior to 2011 | <u>-47.15</u> | <u>-36.78</u> | <u>-83.94</u> |
| Rate applicable in 2011 | 14.34 | 27.19 | 41.52 |

(a) Includes revenue received from non-contractors.

(b) Includes 1. Delta Facility planning costs, 2. Delta Studies costs, and 3. Suisun Marsh Facilities Costs.

TABLE B-21. Total Delta Water Charge for Each Contractor

(in dollars)

Sheet 1 of 4

| Calendar Year | NORTH BAY AREA | | | SOUTH BAY AREA | | | | CENTRAL COASTAL AREA | | |
|------------------|--------------------------|------------------------|-------------|--|--|--|-------------|--|--------------------------------------|-------------|
| | Napa County FC&WCD | Solano County WA | Total | Alameda County FC&WCD, Zone 7 | Alameda County Water District | Santa Clara Valley Water District | Total | San Luis Obispo County FC&WCD | Santa Barbara County FC&WCD | Total |
| | [1] | [2] | [3] | [4] | [5] | [6] | [7] | [8] | [9] | [10] |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 14,000 | 50,050 | 177,100 | 241,150 | 0 | 0 | 0 |
| 1968 | 0 | 0 | 0 | 19,156 | 29,701 | 193,245 | 242,102 | 0 | 0 | 0 |
| 1969 | 0 | 0 | 0 | 30,324 | 44,096 | 215,483 | 289,903 | 0 | 0 | 0 |
| 1970 | 0 | 0 | 0 | 80,908 | 107,730 | 585,200 | 773,838 | 0 | 0 | 0 |
| 1971 | 0 | 0 | 0 | 57,320 | 123,080 | 637,120 | 817,520 | 0 | 0 | 0 |
| 1972 | 0 | 0 | 0 | 99,668 | 143,877 | 707,328 | 950,873 | 0 | 0 | 0 |
| 1973 | 0 | 0 | 0 | 120,880 | 167,099 | 782,167 | 1,070,146 | 0 | 0 | 0 |
| 1974 | 0 | 0 | 0 | 137,684 | 182,339 | 818,664 | 1,138,687 | 0 | 0 | 0 |
| 1975 | 0 | 0 | 0 | 146,204 | 187,324 | 804,123 | 1,137,651 | 0 | 0 | 0 |
| 1976 | 0 | 0 | 0 | 168,489 | 208,652 | 862,036 | 1,239,177 | 0 | 0 | 0 |
| 1977 | 0 | 0 | 0 | 172,931 | 208,645 | 827,062 | 1,208,638 | 0 | 0 | 0 |
| 1978 | 0 | 0 | 0 | 206,378 | 243,231 | 926,594 | 1,376,203 | 0 | 0 | 0 |
| 1979 | 0 | 0 | 0 | 237,771 | 273,208 | 1,005,955 | 1,516,934 | 0 | 0 | 0 |
| 1980 | 0 | 18,325 | 18,325 | 272,717 | 307,426 | 1,090,867 | 1,671,010 | 12,396 | 3,479 | 15,875 |
| 1981 | 0 | 25,440 | 25,440 | 415,564 | 469,768 | 1,589,984 | 2,475,316 | 18,068 | 10,414 | 28,482 |
| 1982 | 0 | 34,917 | 34,917 | 457,988 | 519,053 | 1,679,289 | 2,656,330 | 38,166 | 99,788 | 137,954 |
| 1983 | 0 | 12,035 | 12,035 | 316,703 | 359,775 | 1,114,795 | 1,791,273 | 38,004 | 68,902 | 106,906 |
| 1984 | 0 | 22,453 | 22,453 | 334,587 | 380,914 | 1,132,448 | 1,847,949 | 57,909 | 105,498 | 163,407 |
| 1985 | 0 | 22,001 | 22,001 | 381,970 | 435,728 | 1,244,939 | 2,062,637 | 106,103 | 192,937 | 299,040 |
| 1986 | 35,358 | 21,767 | 57,125 | 423,378 | 485,372 | 1,330,615 | 2,239,365 | 151,206 | 275,347 | 426,553 |
| 1987 | 0 | 22,984 | 22,984 | 430,024 | 493,786 | 1,304,900 | 2,228,710 | 185,355 | 336,664 | 522,019 |
| 1988 | 88,878 | 150,466 | 239,344 | 464,114 | 533,731 | 1,361,400 | 2,359,245 | 239,792 | 436,607 | 676,399 |
| 1989 | 102,688 | 305,328 | 408,016 | 513,853 | 591,760 | 1,491,833 | 2,597,446 | 331,518 | 602,402 | 933,920 |
| 1990 | 112,723 | 355,132 | 467,855 | 534,787 | 616,676 | 1,537,512 | 2,688,975 | 417,802 | 760,166 | 1,177,968 |
| 1991 | 129,296 | 395,515 | 524,811 | 603,028 | 681,067 | 1,667,194 | 2,951,289 | 443,403 | 806,745 | 1,250,148 |
| 1992 | 158,879 | 489,808 | 648,687 | 729,545 | 808,579 | 1,945,453 | 3,483,577 | 506,628 | 921,780 | 1,428,408 |
| 1993 | 172,457 | 530,778 | 703,235 | 771,894 | 840,958 | 1,990,673 | 3,603,525 | 507,825 | 923,957 | 1,431,782 |
| 1994 | 177,824 | 546,610 | 724,434 | 778,647 | 817,579 | 1,946,615 | 3,542,841 | 486,654 | 885,437 | 1,372,091 |
| 1995 | 203,738 | 713,497 | 917,235 | 874,946 | 874,946 | 2,083,205 | 3,833,097 | 520,801 | 947,567 | 1,468,368 |
| 1996 | 213,506 | 774,152 | 987,658 | 901,129 | 860,168 | 2,048,020 | 3,809,317 | 512,005 | 931,562 | 1,443,567 |
| 1997 | 250,558 | 866,141 | 1,116,699 | 1,041,633 | 951,056 | 2,264,420 | 4,257,109 | 566,105 | 1,029,994 | 1,596,099 |
| 1998 | 266,952 | 882,469 | 1,149,421 | 1,048,658 | 957,470 | 2,279,691 | 4,285,819 | 141,683 | 888,760 | 1,030,443 |
| 1999 | 290,688 | 923,459 | 1,214,147 | 1,084,480 | 990,178 | 2,357,566 | 4,432,224 | 589,391 | 1,072,362 | 1,661,753 |
| 2000 | 390,936 | 948,784 | 1,339,720 | 1,628,402 | 1,005,778 | 2,394,709 | 5,028,889 | 598,677 | 1,089,257 | 1,687,934 |
| 2001 | 496,412 | 1,097,880 | 1,594,292 | 1,868,283 | 1,005,998 | 2,395,234 | 5,269,515 | 598,809 | 1,089,496 | 1,688,305 |
| 2002 | 512,928 | 1,125,429 | 1,638,357 | 1,896,134 | 1,020,996 | 2,430,942 | 5,348,072 | 607,736 | 1,105,738 | 1,713,474 |
| 2003 | 511,059 | 1,112,692 | 1,623,751 | 1,856,232 | 999,510 | 2,379,785 | 5,235,527 | 594,946 | 1,082,469 | 1,677,415 |
| 2004 | 515,037 | 1,323,518 | 1,838,555 | 1,848,004 | 990,002 | 2,357,148 | 5,195,154 | 589,286 | 1,072,172 | 1,661,458 |
| 2005 | 544,123 | 1,156,941 | 1,701,064 | 1,973,748 | 1,028,262 | 2,448,242 | 5,450,252 | 612,060 | 1,113,607 | 1,725,667 |
| 2006 | 559,368 | 1,173,458 | 1,732,826 | 1,999,809 | 1,041,839 | 2,480,569 | 5,522,217 | 620,142 | 1,128,312 | 1,748,454 |
| 2007 | 623,728 | 1,291,247 | 1,914,975 | 2,198,222 | 1,145,206 | 2,726,679 | 6,070,107 | 681,671 | 1,240,257 | 1,921,928 |
| 2008 | 647,090 | 1,322,240 | 1,969,330 | 2,248,611 | 1,171,457 | 2,769,182 | 6,209,250 | 697,296 | 1,268,687 | 1,965,983 |
| 2009 | 717,087 | 1,446,549 | 2,163,636 | 2,457,420 | 1,280,240 | 3,048,190 | 6,785,850 | 762,047 | 1,386,499 | 2,148,546 |
| 2010 | 1,105,529 | 1,809,450 | 2,914,979 | 3,070,686 | 1,599,732 | 3,808,886 | 8,479,304 | 952,222 | 1,732,510 | 2,684,732 |
| 2011 | 1,205,162 | 1,974,597 | 3,179,759 | 3,347,423 | 1,743,904 | 4,152,152 | 9,243,479 | 1,038,038 | 1,888,648 | 2,926,686 |
| 2012 | 1,205,162 | 1,976,673 | 3,181,835 | 3,347,423 | 1,743,904 | 4,152,152 | 9,243,479 | 1,038,038 | 1,888,648 | 2,926,686 |
| 2013 | 1,205,162 | 1,978,749 | 3,183,911 | 3,347,423 | 1,743,904 | 4,152,152 | 9,243,479 | 1,038,038 | 1,888,648 | 2,926,686 |
| 2014 | 1,205,162 | 1,980,826 | 3,185,988 | 3,347,423 | 1,743,904 | 4,152,152 | 9,243,479 | 1,038,038 | 1,888,648 | 2,926,686 |
| 2015 | 1,205,162 | 1,982,902 | 3,188,064 | 3,347,423 | 1,743,904 | 4,152,152 | 9,243,479 | 1,038,038 | 1,888,648 | 2,926,686 |
| 2016 | 1,205,162 | 1,982,902 | 3,188,064 | 3,347,423 | 1,743,904 | 4,152,152 | 9,243,479 | 1,038,038 | 1,888,648 | 2,926,686 |
| 2017 | 1,205,162 | 1,982,902 | 3,188,064 | 3,347,423 | 1,743,904 | 4,152,152 | 9,243,479 | 1,038,038 | 1,888,648 | 2,926,686 |
| 2018 | 1,205,162 | 1,982,902 | 3,188,064 | 3,347,423 | 1,743,904 | 4,152,152 | 9,243,479 | 1,038,038 | 1,888,648 | 2,926,686 |
| 2019 | 1,205,162 | 1,982,902 | 3,188,064 | 3,347,423 | 1,743,904 | 4,152,152 | 9,243,479 | 1,038,038 | 1,888,648 | 2,926,686 |
| 2020 | 1,205,162 | 1,982,902 | 3,188,064 | 3,347,423 | 1,743,904 | 4,152,152 | 9,243,479 | 1,038,038 | 1,888,648 | 2,926,686 |
| 2021 | 1,205,162 | 1,982,902 | 3,188,064 | 3,347,423 | 1,743,904 | 4,152,152 | 9,243,479 | 1,038,038 | 1,888,648 | 2,926,686 |
| 2022 | 1,205,162 | 1,982,902 | 3,188,064 | 3,347,423 | 1,743,904 | 4,152,152 | 9,243,479 | 1,038,038 | 1,888,648 | 2,926,686 |
| 2023 | 1,205,162 | 1,982,902 | 3,188,064 | 3,347,423 | 1,743,904 | 4,152,152 | 9,243,479 | 1,038,038 | 1,888,648 | 2,926,686 |
| 2024 | 1,205,162 | 1,982,902 | 3,188,064 | 3,347,423 | 1,743,904 | 4,152,152 | 9,243,479 | 1,038,038 | 1,888,648 | 2,926,686 |
| 2025 | 1,205,162 | 1,982,902 | 3,188,064 | 3,347,423 | 1,743,904 | 4,152,152 | 9,243,479 | 1,038,038 | 1,888,648 | 2,926,686 |
| 2026 | 1,205,162 | 1,982,902 | 3,188,064 | 3,347,423 | 1,743,904 | 4,152,152 | 9,243,479 | 1,038,038 | 1,888,648 | 2,926,686 |
| 2027 | 1,205,162 | 1,982,902 | 3,188,064 | 3,347,423 | 1,743,904 | 4,152,152 | 9,243,479 | 1,038,038 | 1,888,648 | 2,926,686 |
| 2028 | 1,205,162 | 1,982,902 | 3,188,064 | 3,347,423 | 1,743,904 | 4,152,152 | 9,243,479 | 1,038,038 | 1,888,648 | 2,926,686 |
| 2029 | 1,205,162 | 1,982,902 | 3,188,064 | 3,347,423 | 1,743,904 | 4,152,152 | 9,243,479 | 1,038,038 | 1,888,648 | 2,926,686 |
| 2030 | 1,205,162 | 1,982,902 | 3,188,064 | 3,347,423 | 1,743,904 | 4,152,152 | 9,243,479 | 1,038,038 | 1,888,648 | 2,926,686 |
| 2031 | 1,205,162 | 1,982,902 | 3,188,064 | 3,347,423 | 1,743,904 | 4,152,152 | 9,243,479 | 1,038,038 | 1,888,648 | 2,926,686 |
| 2032 | 1,205,162 | 1,982,902 | 3,188,064 | 3,347,423 | 1,743,904 | 4,152,152 | 9,243,479 | 1,038,038 | 1,888,648 | 2,926,686 |
| 2033 | 1,205,162 | 1,982,902 | 3,188,064 | 3,347,423 | 1,743,904 | 4,152,152 | 9,243,479 | 1,038,038 | 1,888,648 | 2,926,686 |
| 2034 | 1,205,162 | 1,982,902 | 3,188,064 | 3,347,423 | 1,743,904 | 4,152,152 | 9,243,479 | 1,038,038 | 1,888,648 | 2,926,686 |
| 2035 | 1,205,162 | 1,982,902 | 3,188,064 | 3,347,423 | 1,743,904 | 4,152,152 | 9,243,479 | 1,038,038 | 1,888,648 | 2,926,686 |
| TOTAL | 38,955,892 | 70,473,252 | 109,429,144 | 120,602,484 | 70,831,642 | 175,066,862 | 366,500,988 | 39,136,656 | 71,825,572 | 110,962,228 |

TABLE B-21. Total Delta Water Charge for Each Contractor

(in dollars)

Sheet 2 of 4

| Calendar Year | SAN JOAQUIN VALLEY AREA | | | | | | | | |
|------------------|--------------------------------------|---|---|--------------------------------|-------------------|-----------------------|-------------------------------|---|---------------|
| | Dudley Ridge Water District | Empire West Side Irrigation District | Future Contractor San Joaquin Valley | Kern County Water Agency | | County of Kings | Oak Flat Water District | Tulare Lake Basin Water Storage District | Total |
| | | | | Municipal and Industrial | Agri- cultural | | | | |
| | [11] | [12] | [13] | [14] | [15] | [16] | [17] | [18] | [19] |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1968 | 40,695 | 10,469 | 0 | 0 | 165,522 | 3,177 | 8,073 | 98,608 | 326,544 |
| 1969 | 61,267 | 3,281 | 0 | 0 | 337,686 | 4,200 | 8,805 | 102,478 | 517,717 |
| 1970 | 104,405 | 19,950 | 0 | 0 | 964,915 | 8,645 | 17,290 | 228,095 | 1,343,300 |
| 1971 | 129,596 | 21,720 | 0 | 0 | 1,377,772 | 9,412 | 20,272 | 264,260 | 1,823,032 |
| 1972 | 160,756 | 24,113 | 0 | 0 | 2,175,835 | 11,253 | 43,131 | 905,057 | 3,320,145 |
| 1973 | 195,541 | 26,664 | 0 | 386,638 | 2,373,167 | 13,333 | 27,553 | 373,307 | 3,396,203 |
| 1974 | 224,202 | 27,909 | 0 | 446,545 | 2,781,595 | 13,954 | 29,770 | 445,138 | 3,969,113 |
| 1975 | 329,688 | 27,413 | 0 | 481,560 | 3,041,048 | 14,620 | 33,702 | 827,591 | 4,755,622 |
| 1976 | 414,245 | 29,388 | 0 | 549,549 | 3,931,785 | 15,673 | 35,966 | 877,151 | 5,853,757 |
| 1977 | 312,532 | 28,195 | 0 | 569,545 | 4,071,218 | 15,977 | 40,289 | 626,210 | 5,663,966 |
| 1978 | 342,208 | 31,588 | 0 | 674,939 | 4,950,959 | 20,006 | 41,065 | 666,516 | 6,727,281 |
| 1979 | 395,523 | 34,294 | 0 | 772,757 | 5,901,986 | 22,863 | 45,725 | 771,613 | 7,944,761 |
| 1980 | 555,341 | 37,679 | 0 | 881,371 | 6,984,026 | 27,272 | 70,658 | 933,481 | 9,489,828 |
| 1981 | 740,789 | 54,204 | 0 | 1,351,487 | 11,140,730 | 41,556 | 77,692 | 1,373,168 | 14,779,626 |
| 1982 | 782,396 | 57,248 | 0 | 1,518,993 | 12,703,436 | 47,707 | 85,873 | 1,530,443 | 16,726,096 |
| 1983 | 543,462 | 38,004 | 0 | 1,057,789 | 9,141,315 | 35,471 | 58,273 | 78,506 | 10,952,820 |
| 1984 | 580,379 | 13,572 | 0 | 1,333,200 | 9,741,623 | 39,893 | 61,770 | 756,132 | 12,526,569 |
| 1985 | 667,740 | 42,441 | 0 | 1,540,611 | 11,403,920 | 48,100 | 69,320 | 644,383 | 14,416,515 |
| 1986 | 745,447 | 45,362 | 0 | 1,714,679 | 12,925,113 | 55,946 | 77,115 | 1,469,725 | 17,033,387 |
| 1987 | 762,180 | 44,485 | 0 | 1,766,065 | 13,410,817 | 59,314 | 77,108 | 1,503,601 | 17,623,570 |
| 1988 | 827,669 | 46,411 | 0 | 1,916,790 | 14,707,763 | 61,882 | 83,540 | 1,633,680 | 19,277,735 |
| 1989 | 921,621 | 49,728 | 0 | 2,125,033 | 16,312,361 | 66,304 | 92,825 | 1,821,693 | 21,389,565 |
| 1990 | 964,288 | 50,136 | 0 | 1,998,766 | 17,276,959 | 66,848 | 95,259 | 1,980,383 | 22,432,639 |
| 1991 | 1,023,374 | 53,208 | 0 | 2,121,239 | 18,335,590 | 70,944 | 101,096 | 2,101,729 | 23,807,180 |
| 1992 | 1,169,299 | 60,795 | 0 | 2,727,688 | 20,646,125 | 81,061 | 115,511 | 2,401,419 | 27,201,898 |
| 1993 | 1,172,060 | 60,939 | 0 | 2,734,129 | 20,694,874 | 81,252 | 115,784 | 2,407,089 | 27,266,127 |
| 1994 | 1,123,198 | 58,398 | 0 | 2,156,809 | 20,295,455 | 77,865 | 110,957 | 2,306,739 | 26,129,421 |
| 1995 | 1,202,009 | 62,497 | 0 | 2,803,995 | 21,223,694 | 83,328 | 118,743 | 2,468,598 | 27,962,864 |
| 1996 | 534,818 | 69,191 | 0 | 2,756,635 | 19,492,814 | 81,921 | 102,219 | 2,426,904 | 25,464,502 |
| 1997 | 1,208,521 | 67,162 | 0 | 3,047,908 | 22,148,973 | 90,576 | 129,072 | 2,683,338 | 29,375,550 |
| 1998 | 1,216,671 | 77,807 | 0 | 2,726,511 | 22,070,376 | 91,188 | 129,942 | 2,820,148 | 29,132,643 |
| 1999 | 1,258,233 | 69,974 | 0 | 2,819,648 | 22,824,299 | 94,303 | 134,381 | 2,793,715 | 29,994,553 |
| 2000 | 1,278,056 | 70,943 | 0 | 3,223,279 | 21,220,235 | 95,788 | 136,498 | 2,837,730 | 28,862,529 |
| 2001 | 1,278,336 | 71,058 | 0 | 2,864,700 | 21,110,372 | 95,809 | 136,528 | 2,838,352 | 28,395,155 |
| 2002 | 1,393,975 | 72,121 | 0 | 3,272,056 | 21,060,431 | 97,237 | 138,564 | 2,711,156 | 28,745,540 |
| 2003 | 1,364,640 | 70,550 | 0 | 3,203,191 | 20,617,243 | 95,192 | 135,648 | 2,654,103 | 28,140,567 |
| 2004 | 1,351,659 | 70,317 | 0 | 3,508,929 | 20,084,922 | 94,286 | 134,357 | 2,619,428 | 27,863,898 |
| 2005 | 1,403,895 | 73,157 | 0 | 3,474,639 | 20,976,687 | 220,342 | 139,550 | 2,598,245 | 28,886,515 |
| 2006 | 1,422,433 | 74,130 | 0 | 3,338,845 | 21,435,340 | 223,252 | 141,392 | 2,386,977 | 29,022,369 |
| 2007 | 1,563,559 | 81,479 | 0 | 3,670,110 | 23,562,051 | 253,717 | 155,421 | 2,615,486 | 31,901,823 |
| 2008 | 1,599,401 | 83,191 | 0 | 3,754,239 | 24,102,160 | 259,533 | 158,983 | 2,675,439 | 32,632,946 |
| 2009 | 1,747,923 | 90,846 | 0 | 4,102,863 | 26,340,321 | 283,634 | 173,747 | 2,923,885 | 35,663,219 |
| 2010 | 1,917,507 | 113,466 | 0 | 5,126,760 | 32,304,300 | 354,417 | 217,107 | 3,386,937 | 43,420,494 |
| 2011 | 2,380,968 | 122,750 | 0 | 5,588,796 | 35,215,646 | 386,358 | 236,673 | 3,692,176 | 47,623,367 |
| 2012 | 2,380,968 | 122,750 | 0 | 5,588,796 | 35,215,646 | 386,358 | 236,673 | 3,692,176 | 47,623,367 |
| 2013 | 2,380,968 | 122,750 | 0 | 5,588,796 | 35,215,646 | 386,358 | 236,673 | 3,692,176 | 47,623,367 |
| 2014 | 2,380,968 | 122,750 | 0 | 5,588,796 | 35,215,646 | 386,358 | 236,673 | 3,692,176 | 47,623,367 |
| 2015 | 2,380,968 | 122,750 | 0 | 5,588,796 | 35,215,646 | 386,358 | 236,673 | 3,692,176 | 47,623,367 |
| 2016 | 2,380,968 | 122,750 | 0 | 5,588,796 | 35,215,646 | 386,358 | 236,673 | 3,692,176 | 47,623,367 |
| 2017 | 2,380,968 | 122,750 | 0 | 5,588,796 | 35,215,646 | 386,358 | 236,673 | 3,692,176 | 47,623,367 |
| 2018 | 2,380,968 | 122,750 | 0 | 5,588,796 | 35,215,646 | 386,358 | 236,673 | 3,692,176 | 47,623,367 |
| 2019 | 2,380,968 | 122,750 | 0 | 5,588,796 | 35,215,646 | 386,358 | 236,673 | 3,692,176 | 47,623,367 |
| 2020 | 2,380,968 | 122,750 | 0 | 5,588,796 | 35,215,646 | 386,358 | 236,673 | 3,692,176 | 47,623,367 |
| 2021 | 2,380,968 | 122,750 | 0 | 5,588,796 | 35,215,646 | 386,358 | 236,673 | 3,692,176 | 47,623,367 |
| 2022 | 2,380,968 | 122,750 | 0 | 5,588,796 | 35,215,646 | 386,358 | 236,673 | 3,692,176 | 47,623,367 |
| 2023 | 2,380,968 | 122,750 | 0 | 5,588,796 | 35,215,646 | 386,358 | 236,673 | 3,692,176 | 47,623,367 |
| 2024 | 2,380,968 | 122,750 | 0 | 5,588,796 | 35,215,646 | 386,358 | 236,673 | 3,692,176 | 47,623,367 |
| 2025 | 2,380,968 | 122,750 | 0 | 5,588,796 | 35,215,646 | 386,358 | 236,673 | 3,692,176 | 47,623,367 |
| 2026 | 2,380,968 | 122,750 | 0 | 5,588,796 | 35,215,646 | 386,358 | 236,673 | 3,692,176 | 47,623,367 |
| 2027 | 2,380,968 | 122,750 | 0 | 5,588,796 | 35,215,646 | 386,358 | 236,673 | 3,692,176 | 47,623,367 |
| 2028 | 2,380,968 | 122,750 | 0 | 5,588,796 | 35,215,646 | 386,358 | 236,673 | 3,692,176 | 47,623,367 |
| 2029 | 2,380,968 | 122,750 | 0 | 5,588,796 | 35,215,646 | 386,358 | 236,673 | 3,692,176 | 47,623,367 |
| 2030 | 2,380,968 | 122,750 | 0 | 5,588,796 | 35,215,646 | 386,358 | 236,673 | 3,692,176 | 47,623,367 |
| 2031 | 2,380,968 | 122,750 | 0 | 5,588,796 | 35,215,646 | 386,358 | 236,673 | 3,692,176 | 47,623,367 |
| 2032 | 2,380,968 | 122,750 | 0 | 5,588,796 | 35,215,646 | 386,358 | 236,673 | 3,692,176 | 47,623,367 |
| 2033 | 2,380,968 | 122,750 | 0 | 5,588,796 | 35,215,646 | 386,358 | 236,673 | 3,692,176 | 47,623,367 |
| 2034 | 2,380,968 | 122,750 | 0 | 5,588,796 | 35,215,646 | 386,358 | 236,673 | 3,692,176 | 47,623,367 |
| 2035 | 2,380,968 | 122,750 | 0 | 5,588,796 | 35,215,646 | 386,358 | 236,673 | 3,692,176 | 47,623,367 |
| TOTAL | 96,555,737 | 5,284,233 | 0 | 224,240,390 | 1,488,758,963 | 13,188,001 | 9,843,399 | 164,873,036 | 2,002,743,759 |

TABLE B-21. Total Delta Water Charge for Each Contractor

(in dollars)

Sheet 3 of 4

| Calendar Year | SOUTHERN CALIFORNIA AREA | | | | | | | | | |
|------------------|---|------------------------------------|--|--|---------------------------|---|---------------------------|-------------------------------|--|---|
| | Antelope Valley- East Kern Water Agency | Castaic Lake Water Agency | Coachella Valley Water District | Crestline- Lake Arrowhead Water Agency | Desert Water Agency | Littlerock Creek Irrigation District | Mojave Water Agency | Palmdale Water District | San Bernardino Valley Municipal Water District | San Gabriel Valley Municipal Water District |
| | [20] | [21] | [22] | [23] | [24] | [25] | [26] | [27] | [28] | [29] |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1968 | 0 | 13,060 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1969 | 0 | 17,804 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1970 | 0 | 37,905 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1971 | 0 | 48,508 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1972 | 160,756 | 74,751 | 41,797 | 4,662 | 64,303 | 1,367 | 67,518 | 13,021 | 369,739 | 85,202 |
| 1973 | 222,207 | 107,163 | 51,552 | 7,279 | 79,994 | 2,577 | 95,104 | 26,131 | 54,908 | 14,338 |
| 1974 | 279,090 | 143,266 | 59,539 | 10,791 | 93,030 | 3,721 | 121,869 | 39,631 | 465,150 | 114,427 |
| 1975 | 319,822 | 166,307 | 63,964 | 13,250 | 100,515 | 4,752 | 140,722 | 50,989 | 479,733 | 119,705 |
| 1976 | 431,018 | 207,673 | 74,449 | 17,045 | 117,550 | 6,269 | 174,366 | 67,591 | 538,772 | 137,142 |
| 1977 | 469,922 | 226,502 | 79,144 | 19,079 | 122,180 | 6,861 | 189,848 | 77,255 | 540,410 | 139,097 |
| 1978 | 600,180 | 274,819 | 97,313 | 24,428 | 147,413 | 9,687 | 236,913 | 98,345 | 631,768 | 165,313 |
| 1979 | 720,173 | 320,077 | 115,033 | 29,836 | 171,470 | 11,889 | 284,640 | 117,285 | 714,457 | 189,760 |
| 1980 | 857,818 | 376,845 | 134,920 | 35,949 | 210,736 | 14,256 | 337,177 | 138,590 | 811,952 | 215,694 |
| 1981 | 1,355,100 | 592,631 | 218,713 | 57,637 | 343,292 | 22,946 | 534,813 | 211,396 | 1,237,658 | 330,644 |
| 1982 | 1,551,434 | 664,082 | 254,298 | 66,408 | 400,739 | 26,335 | 613,057 | 235,100 | 1,341,923 | 364,482 |
| 1983 | 1,110,994 | 472,521 | 184,283 | 47,759 | 291,367 | 19,002 | 434,517 | 163,925 | 943,775 | 252,096 |
| 1984 | 450,405 | 509,602 | 202,914 | 52,247 | 321,718 | 20,719 | 472,282 | 174,500 | 1,003,760 | 266,383 |
| 1985 | 565,881 | 591,346 | 240,344 | 61,540 | 381,970 | 24,474 | 551,734 | 200,605 | 1,152,983 | 308,405 |
| 1986 | 635,066 | 659,259 | 275,347 | 70,160 | 438,498 | 27,822 | 625,994 | 223,785 | 1,285,253 | 350,799 |
| 1987 | 652,450 | 676,176 | 288,131 | 73,104 | 467,095 | 29,064 | 648,002 | 228,654 | 1,319,729 | 364,779 |
| 1988 | 711,641 | 742,582 | 319,496 | 80,756 | 525,996 | 32,024 | 711,641 | 248,146 | 1,438,752 | 402,232 |
| 1989 | 2,083,593 | 830,453 | 362,565 | 91,333 | 605,021 | 36,301 | 803,932 | 276,155 | 1,607,864 | 454,180 |
| 1990 | 2,207,667 | 869,029 | 386,049 | 96,930 | 636,731 | 38,438 | 848,974 | 289,119 | 1,696,277 | 481,308 |
| 1991 | 2,454,678 | 961,298 | 409,704 | 102,869 | 675,746 | 40,793 | 900,994 | 306,835 | 1,819,725 | 510,800 |
| 1992 | 2,804,695 | 1,098,371 | 468,125 | 117,538 | 772,102 | 46,610 | 1,029,469 | 350,587 | 2,079,203 | 583,636 |
| 1993 | 2,811,318 | 1,100,964 | 469,230 | 117,815 | 773,925 | 46,720 | 1,031,900 | 351,415 | 2,084,113 | 585,014 |
| 1994 | 2,694,116 | 1,055,065 | 449,668 | 112,905 | 741,661 | 44,772 | 988,880 | 336,766 | 1,997,227 | 560,625 |
| 1995 | 2,883,156 | 1,129,097 | 481,220 | 120,826 | 793,702 | 47,914 | 1,058,269 | 360,394 | 2,137,369 | 599,963 |
| 1996 | 2,834,460 | 1,110,027 | 473,093 | 118,785 | 780,296 | 47,104 | 1,040,394 | 354,307 | 2,101,269 | 589,830 |
| 1997 | 3,133,957 | 1,227,316 | 523,081 | 131,336 | 862,744 | 52,082 | 1,150,325 | 391,745 | 2,323,295 | 652,153 |
| 1998 | 3,155,093 | 1,235,593 | 526,609 | 132,222 | 868,562 | 52,433 | 1,728,006 | 394,387 | 2,338,963 | 656,551 |
| 1999 | 3,262,870 | 1,277,800 | 544,598 | 136,739 | 898,233 | 54,224 | 1,787,034 | 407,859 | 2,418,863 | 678,979 |
| 2000 | 3,314,278 | 2,279,763 | 553,178 | 138,893 | 912,384 | 55,078 | 1,815,190 | 510,073 | 2,456,972 | 689,676 |
| 2001 | 3,315,004 | 2,280,263 | 553,299 | 138,924 | 912,584 | 55,090 | 1,815,587 | 510,185 | 2,457,510 | 689,827 |
| 2002 | 3,437,351 | 2,314,256 | 561,548 | 140,995 | 926,188 | 55,912 | 1,842,654 | 517,791 | 2,494,146 | 700,112 |
| 2003 | 3,365,016 | 2,265,555 | 549,731 | 138,028 | 906,698 | 54,735 | 1,803,877 | 506,894 | 2,441,659 | 685,379 |
| 2004 | 3,333,008 | 2,244,004 | 544,501 | 136,715 | 898,074 | 54,215 | 1,786,717 | 502,073 | 2,418,434 | 678,859 |
| 2005 | 3,461,814 | 2,330,727 | 565,544 | 141,999 | 932,780 | 56,310 | 1,917,073 | 521,475 | 2,511,896 | 705,093 |
| 2006 | 3,507,524 | 2,361,502 | 3,003,969 | 143,873 | 1,240,285 | 57,053 | 1,880,272 | 528,361 | 2,545,064 | 714,404 |
| 2007 | 3,855,524 | 2,595,798 | 3,302,008 | 158,148 | 1,363,339 | 62,714 | 2,066,822 | 580,783 | 2,797,573 | 785,284 |
| 2008 | 3,943,904 | 2,655,301 | 3,377,700 | 161,773 | 1,394,591 | 64,151 | 2,114,200 | 594,096 | 2,861,701 | 803,284 |
| 2009 | 4,310,140 | 2,901,877 | 3,691,358 | 176,795 | 1,524,095 | 70,109 | 2,310,528 | 649,264 | 3,127,443 | 877,878 |
| 2010 | 5,385,764 | 3,626,059 | 5,269,593 | 220,916 | 2,123,453 | 87,605 | 3,153,757 | 811,293 | 3,907,916 | 1,096,959 |
| 2011 | 5,871,143 | 3,952,849 | 5,744,502 | 240,825 | 2,314,825 | 95,499 | 3,147,331 | 884,408 | 4,260,108 | 1,195,820 |
| 2012 | 5,871,143 | 3,952,849 | 5,744,502 | 240,825 | 2,314,825 | 95,499 | 3,147,331 | 884,408 | 4,260,108 | 1,195,820 |
| 2013 | 5,871,143 | 3,952,849 | 5,744,502 | 240,825 | 2,314,825 | 95,499 | 3,147,331 | 884,408 | 4,260,108 | 1,195,820 |
| 2014 | 5,871,143 | 3,952,849 | 5,744,502 | 240,825 | 2,314,825 | 95,499 | 3,147,331 | 884,408 | 4,260,108 | 1,195,820 |
| 2015 | 5,871,143 | 3,952,849 | 5,744,502 | 240,825 | 2,314,825 | 95,499 | 3,147,331 | 884,408 | 4,260,108 | 1,195,820 |
| 2016 | 5,871,143 | 3,952,849 | 5,744,502 | 240,825 | 2,314,825 | 95,499 | 3,147,331 | 884,408 | 4,260,108 | 1,195,820 |
| 2017 | 5,871,143 | 3,952,849 | 5,744,502 | 240,825 | 2,314,825 | 95,499 | 3,147,331 | 884,408 | 4,260,108 | 1,195,820 |
| 2018 | 5,871,143 | 3,952,849 | 5,744,502 | 240,825 | 2,314,825 | 95,499 | 3,147,331 | 884,408 | 4,260,108 | 1,195,820 |
| 2019 | 5,871,143 | 3,952,849 | 5,744,502 | 240,825 | 2,314,825 | 95,499 | 3,147,331 | 884,408 | 4,260,108 | 1,195,820 |
| 2020 | 5,871,143 | 3,952,849 | 5,744,502 | 240,825 | 2,314,825 | 95,499 | 3,147,331 | 884,408 | 4,260,108 | 1,195,820 |
| 2021 | 5,871,143 | 3,952,849 | 5,744,502 | 240,825 | 2,314,825 | 95,499 | 3,147,331 | 884,408 | 4,260,108 | 1,195,820 |
| 2022 | 5,871,143 | 3,952,849 | 5,744,502 | 240,825 | 2,314,825 | 95,499 | 3,147,331 | 884,408 | 4,260,108 | 1,195,820 |
| 2023 | 5,871,143 | 3,952,849 | 5,744,502 | 240,825 | 2,314,825 | 95,499 | 3,147,331 | 884,408 | 4,260,108 | 1,195,820 |
| 2024 | 5,871,143 | 3,952,849 | 5,744,502 | 240,825 | 2,314,825 | 95,499 | 3,147,331 | 884,408 | 4,260,108 | 1,195,820 |
| 2025 | 5,871,143 | 3,952,849 | 5,744,502 | 240,825 | 2,314,825 | 95,499 | 3,147,331 | 884,408 | 4,260,108 | 1,195,820 |
| 2026 | 5,871,143 | 3,952,849 | 5,744,502 | 240,825 | 2,314,825 | 95,499 | 3,147,331 | 884,408 | 4,260,108 | 1,195,820 |
| 2027 | 5,871,143 | 3,952,849 | 5,744,502 | 240,825 | 2,314,825 | 95,499 | 3,147,331 | 884,408 | 4,260,108 | 1,195,820 |
| 2028 | 5,871,143 | 3,952,849 | 5,744,502 | 240,825 | 2,314,825 | 95,499 | 3,147,331 | 884,408 | 4,260,108 | 1,195,820 |
| 2029 | 5,871,143 | 3,952,849 | 5,744,502 | 240,825 | 2,314,825 | 95,499 | 3,147,331 | 884,408 | 4,260,108 | 1,195,820 |
| 2030 | 5,871,143 | 3,952,849 | 5,744,502 | 240,825 | 2,314,825 | 95,499 | 3,147,331 | 884,408 | 4,260,108 | 1,195,820 |
| 2031 | 5,871,143 | 3,952,849 | 5,744,502 | 240,825 | 2,314,825 | 95,499 | 3,147,331 | 884,408 | 4,260,108 | 1,195,820 |
| 2032 | 5,871,143 | 3,952,849 | 5,744,502 | 240,825 | 2,314,825 | 95,499 | 3,147,331 | 884,408 | 4,260,108 | 1,195,820 |
| 2033 | 5,871,143 | 3,952,849 | 5,744,502 | 240,825 | 2,314,825 | 95,499 | 3,147,331 | 884,408 | 4,260,108 | 1,195,820 |
| 2034 | 5,871,143 | 3,952,849 | 5,744,502 | 240,825 | 2,314,825 | 95,499 | 3,147,331 | 884,408 | 4,260,108 | 1,195,820 |
| 2035 | 5,871,143 | 3,952,849 | 5,744,502 | 240,825 | 2,314,825 | 95,499 | 3,147,331 | 884,408 | 4,260,108 | 1,195,820 |
| TOTAL | 229,427,462 | 145,494,222 | 173,380,158 | 9,668,912 | 83,691,685 | 3,831,603 | 119,498,326 | 34,477,006 | 173,457,904 | 48,495,792 |

TABLE B-21. Total Delta Water Charge for Each Contractor

(in dollars)

Sheet 4 of 4

| Calendar Year | SOUTHERN CALIFORNIA AREA (continued) | | | | FEATHER RIVER AREA | | | | South Bay Area Future Contractor | GRAND TOTAL |
|------------------|--|--|---|---------------|----------------------------|-----------------------|----------------------------|------------|---|----------------|
| | San Gorgonio Pass Water Agency | The Metropolitan Water District of Southern California | Ventura County Flood Control District | Total | City of Yuba City | County of Butte | Plumas County FC&WCD | Total | | |
| | [30] | [31] | [32] | [33] | [34] | [35] | [36] | [37] | [38] | [39] |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 241,150 |
| 1968 | 0 | 0 | 0 | 13,060 | 0 | 1,050 | 875 | 1,925 | 0 | 583,631 |
| 1969 | 0 | 0 | 0 | 17,804 | 0 | 1,225 | 929 | 2,154 | 0 | 827,578 |
| 1970 | 0 | 0 | 0 | 37,905 | 0 | 3,848 | 1,995 | 5,843 | 0 | 2,160,886 |
| 1971 | 0 | 0 | 0 | 48,508 | 0 | 4,546 | 3,186 | 7,732 | 0 | 2,696,792 |
| 1972 | 0 | 2,043,211 | 0 | 2,926,327 | 0 | 4,929 | 3,778 | 8,707 | 0 | 7,206,052 |
| 1973 | 0 | 2,317,893 | 0 | 2,979,146 | 0 | 7,059 | 4,444 | 11,503 | 0 | 7,456,998 |
| 1974 | 0 | 4,231,933 | 0 | 5,562,447 | 0 | 8,336 | 4,931 | 13,267 | 0 | 10,683,514 |
| 1975 | 0 | 5,073,286 | 0 | 6,533,045 | 0 | 9,416 | 5,117 | 14,533 | 0 | 12,440,851 |
| 1976 | 0 | 6,422,167 | 0 | 8,194,042 | 0 | 7,004 | 5,780 | 12,784 | 0 | 15,299,760 |
| 1977 | 0 | 7,104,278 | 0 | 8,974,576 | 0 | 16,917 | 5,827 | 22,744 | 0 | 15,869,924 |
| 1978 | 0 | 9,016,389 | 0 | 11,302,568 | 0 | 12,635 | 6,844 | 19,479 | 0 | 19,425,531 |
| 1979 | 0 | 10,935,192 | 0 | 13,609,812 | 0 | 16,575 | 7,773 | 24,348 | 0 | 23,095,855 |
| 1980 | 84,294 | 13,102,796 | 12,396 | 16,333,423 | 0 | 19,834 | 8,801 | 28,635 | 0 | 27,557,096 |
| 1981 | 140,930 | 20,910,099 | 36,136 | 25,991,995 | 0 | 21,682 | 13,370 | 35,052 | 0 | 43,335,911 |
| 1982 | 167,929 | 23,998,560 | 57,248 | 29,441,595 | 0 | 16,117 | 14,694 | 30,811 | 0 | 49,027,703 |
| 1983 | 124,148 | 17,203,307 | 50,672 | 21,298,366 | 0 | 15,202 | 10,134 | 25,336 | 0 | 34,186,736 |
| 1984 | 138,982 | 18,766,458 | 64,344 | 22,444,314 | 20,590 | 15,442 | 10,681 | 46,713 | 0 | 37,051,405 |
| 1985 | 166,935 | 22,050,974 | 84,882 | 26,382,073 | 24,050 | 16,976 | 12,166 | 53,192 | 0 | 43,235,458 |
| 1986 | 195,056 | 25,089,658 | 120,965 | 29,997,662 | 31,753 | 18,145 | 13,457 | 63,355 | 0 | 49,817,447 |
| 1987 | 207,598 | 26,095,043 | 148,284 | 31,198,109 | 37,071 | 17,794 | 13,642 | 68,507 | 0 | 51,663,899 |
| 1988 | 233,604 | 28,781,238 | 201,116 | 34,429,224 | 46,722 | 18,565 | 14,852 | 80,139 | 0 | 57,062,086 |
| 1989 | 268,530 | 32,505,376 | 265,215 | 40,190,518 | 61,184 | 19,891 | 16,576 | 97,651 | 0 | 65,617,116 |
| 1990 | 289,119 | 33,616,369 | 334,242 | 41,790,252 | 63,506 | 20,055 | 17,381 | 100,942 | 0 | 68,658,631 |
| 1991 | 306,835 | 35,676,185 | 354,722 | 44,521,184 | 170,267 | 21,283 | 19,155 | 210,705 | 0 | 73,265,317 |
| 1992 | 350,587 | 40,763,329 | 405,303 | 50,869,555 | 194,545 | 24,318 | 22,697 | 241,560 | 0 | 83,873,685 |
| 1993 | 351,415 | 40,859,579 | 406,260 | 50,989,668 | 195,005 | 24,376 | 23,563 | 242,944 | 0 | 84,237,281 |
| 1994 | 336,766 | 39,156,173 | 389,323 | 48,863,947 | 186,875 | 23,360 | 23,360 | 233,595 | 0 | 80,866,329 |
| 1995 | 360,394 | 41,903,674 | 416,641 | 52,292,619 | 199,987 | 24,999 | 26,040 | 251,026 | 0 | 86,725,209 |
| 1996 | 0 | 41,195,923 | 409,604 | 51,055,092 | 196,610 | 24,576 | 26,624 | 247,810 | 0 | 83,007,946 |
| 1997 | 0 | 45,548,810 | 447,746 | 56,444,590 | 214,918 | 27,173 | 30,223 | 272,314 | 0 | 93,062,361 |
| 1998 | 0 | 45,855,992 | 450,529 | 57,394,940 | 107,459 | 27,356 | 31,537 | 166,352 | 0 | 93,159,618 |
| 1999 | 47,152 | 47,422,430 | 466,491 | 59,403,272 | 226,327 | 28,291 | 33,820 | 288,438 | 0 | 96,994,387 |
| 2000 | 71,841 | 48,169,576 | 478,942 | 61,445,844 | 229,892 | 69,207 | 35,708 | 334,807 | 0 | 98,699,723 |
| 2001 | 95,809 | 48,180,135 | 479,047 | 61,483,264 | 229,942 | 83,833 | 37,187 | 350,962 | 0 | 98,781,493 |
| 2002 | 97,237 | 48,898,394 | 486,188 | 62,472,772 | 233,371 | 85,083 | 39,185 | 357,639 | 0 | 100,275,854 |
| 2003 | 118,989 | 47,869,376 | 475,957 | 61,181,894 | 228,460 | 83,293 | 39,743 | 351,496 | 0 | 98,210,650 |
| 2004 | 141,429 | 47,414,032 | 471,429 | 60,623,490 | 226,287 | 83,306 | 0 | 309,593 | 0 | 97,492,148 |
| 2005 | 159,136 | 49,246,383 | 489,648 | 63,039,878 | 235,031 | 29,701 | 0 | 264,732 | 0 | 101,068,108 |
| 2006 | 173,640 | 47,416,073 | 496,113 | 64,068,133 | 238,135 | 30,107 | 49,810 | 318,052 | 0 | 102,412,051 |
| 2007 | 204,501 | 52,120,469 | 545,336 | 70,438,299 | 268,738 | 33,950 | 19,600 | 322,288 | 0 | 112,569,420 |
| 2008 | 334,702 | 53,315,217 | 557,836 | 72,178,456 | 274,736 | 794,785 | 56,138 | 1,125,659 | 0 | 116,081,624 |
| 2009 | 527,337 | 58,266,144 | 609,638 | 79,042,606 | 292,626 | 844,842 | 63,417 | 1,200,885 | 0 | 127,004,742 |
| 2010 | 658,937 | 72,806,845 | 761,778 | 99,910,875 | 365,653 | 1,054,033 | 1,054,033 | 2,473,719 | 0 | 159,884,103 |
| 2011 | 718,322 | 79,368,383 | 830,430 | 108,624,445 | 410,112 | 1,174,799 | 91,653 | 1,676,564 | 0 | 173,274,300 |
| 2012 | 718,322 | 79,368,383 | 830,430 | 108,624,445 | 410,112 | 1,174,799 | 94,926 | 1,679,837 | 0 | 173,279,649 |
| 2013 | 718,322 | 79,368,383 | 830,430 | 108,624,445 | 410,112 | 1,174,799 | 98,609 | 1,683,520 | 0 | 173,285,408 |
| 2014 | 718,322 | 79,368,383 | 830,430 | 108,624,445 | 410,112 | 1,174,799 | 102,291 | 1,687,202 | 0 | 173,291,167 |
| 2015 | 718,322 | 79,368,383 | 830,430 | 108,624,445 | 410,112 | 1,174,799 | 106,383 | 1,691,294 | 0 | 173,297,335 |
| 2016 | 718,322 | 79,368,383 | 830,430 | 108,624,445 | 410,112 | 1,174,799 | 110,475 | 1,695,386 | 0 | 173,301,427 |
| 2017 | 718,322 | 79,368,383 | 830,430 | 108,624,445 | 410,112 | 1,174,799 | 110,475 | 1,695,386 | 0 | 173,301,427 |
| 2018 | 718,322 | 79,368,383 | 830,430 | 108,624,445 | 410,112 | 1,174,799 | 110,475 | 1,695,386 | 0 | 173,301,427 |
| 2019 | 718,322 | 79,368,383 | 830,430 | 108,624,445 | 410,112 | 1,174,799 | 110,475 | 1,695,386 | 0 | 173,301,427 |
| 2020 | 718,322 | 79,368,383 | 830,430 | 108,624,445 | 410,112 | 1,174,799 | 110,475 | 1,695,386 | 0 | 173,301,427 |
| 2021 | 718,322 | 79,368,383 | 830,430 | 108,624,445 | 410,112 | 1,174,799 | 110,475 | 1,695,386 | 0 | 173,301,427 |
| 2022 | 718,322 | 79,368,383 | 830,430 | 108,624,445 | 410,112 | 1,174,799 | 110,475 | 1,695,386 | 0 | 173,301,427 |
| 2023 | 718,322 | 79,368,383 | 830,430 | 108,624,445 | 410,112 | 1,174,799 | 110,475 | 1,695,386 | 0 | 173,301,427 |
| 2024 | 718,322 | 79,368,383 | 830,430 | 108,624,445 | 410,112 | 1,174,799 | 110,475 | 1,695,386 | 0 | 173,301,427 |
| 2025 | 718,322 | 79,368,383 | 830,430 | 108,624,445 | 410,112 | 1,174,799 | 110,475 | 1,695,386 | 0 | 173,301,427 |
| 2026 | 718,322 | 79,368,383 | 830,430 | 108,624,445 | 410,112 | 1,174,799 | 110,475 | 1,695,386 | 0 | 173,301,427 |
| 2027 | 718,322 | 79,368,383 | 830,430 | 108,624,445 | 410,112 | 1,174,799 | 110,475 | 1,695,386 | 0 | 173,301,427 |
| 2028 | 718,322 | 79,368,383 | 830,430 | 108,624,445 | 410,112 | 1,174,799 | 110,475 | 1,695,386 | 0 | 173,301,427 |
| 2029 | 718,322 | 79,368,383 | 830,430 | 108,624,445 | 410,112 | 1,174,799 | 110,475 | 1,695,386 | 0 | 173,301,427 |
| 2030 | 718,322 | 79,368,383 | 830,430 | 108,624,445 | 410,112 | 1,174,799 | 110,475 | 1,695,386 | 0 | 173,301,427 |
| 2031 | 718,322 | 79,368,383 | 830,430 | 108,624,445 | 410,112 | 1,174,799 | 110,475 | 1,695,386 | 0 | 173,301,427 |
| 2032 | 718,322 | 79,368,383 | 830,430 | 108,624,445 | 410,112 | 1,174,799 | 110,475 | 1,695,386 | 0 | 173,301,427 |
| 2033 | 718,322 | 79,368,383 | 830,430 | 108,624,445 | 410,112 | 1,174,799 | 110,475 | 1,695,386 | 0 | 173,301,427 |
| 2034 | 718,322 | 79,368,383 | 830,430 | 108,624,445 | 410,112 | 1,174,799 | 110,475 | 1,695,386 | 0 | 173,301,427 |
| 2035 | 718,322 | 79,368,383 | 830,430 | 108,624,445 | 410,112 | 1,174,799 | 110,475 | 1,695,386 | 0 | 173,301,427 |
| TOTAL | 24,311,882 | 3,245,558,541 | 31,734,781 | 4,323,028,274 | 15,052,540 | 33,081,090 | 4,532,435 | 52,666,065 | 0 | 6,965,330,458 |

TABLE B-22. Water System Revenue Bond Surcharge for Each Contractor

(in dollars)

Sheet 1 of 4

| Calendar Year | NORTH BAY AREA | | | SOUTH BAY AREA | | | | CENTRAL COASTAL AREA | | |
|------------------|--------------------------|------------------------|------------|--|--|--|------------|------------------------------|----------------------------|------------|
| | Napa County FC&WCD | Solano County WA | Total | Alameda County FC&WCD, Zone 7 | Alameda County Water District | Santa Clara Valley Water District | Total | San Luis Obispo County | Santa Barbara County | Total |
| | [1] | [2] | [3] | [4] | [5] | [6] | [7] | [8] | [9] | [10] |
| 1971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1972 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1973 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1974 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1975 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1976 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1977 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1978 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1979 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1980 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1981 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1982 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1983 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1984 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1985 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1986 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1987 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1988 | 29,131 | 40,505 | 69,636 | 25,436 | 30,176 | 100,035 | 155,647 | 13,126 | 24,392 | 37,518 |
| 1989 | 48,804 | 69,621 | 118,425 | 43,343 | 51,681 | 170,303 | 265,327 | 26,828 | 49,634 | 76,462 |
| 1990 | 41,166 | 60,482 | 101,648 | 38,407 | 51,185 | 149,440 | 239,032 | 27,956 | 51,795 | 79,751 |
| 1991 | 63,389 | 92,401 | 155,790 | 62,470 | 81,991 | 235,712 | 380,173 | 44,887 | 83,709 | 128,596 |
| 1992 | 84,320 | 126,227 | 210,547 | 89,247 | 115,208 | 325,629 | 530,084 | 61,137 | 113,925 | 175,062 |
| 1993 | 90,152 | 137,473 | 227,625 | 98,432 | 125,174 | 347,457 | 571,063 | 67,725 | 126,662 | 194,387 |
| 1994 | 91,785 | 141,222 | 233,007 | 102,021 | 126,216 | 352,415 | 580,652 | 81,420 | 159,156 | 240,576 |
| 1995 | 108,311 | 181,787 | 290,098 | 126,000 | 149,378 | 416,955 | 692,333 | 131,674 | 270,727 | 402,401 |
| 1996 | 132,304 | 232,343 | 364,647 | 158,514 | 180,787 | 505,043 | 844,344 | 242,654 | 534,448 | 777,102 |
| 1997 | 135,556 | 237,492 | 373,048 | 171,263 | 187,162 | 522,127 | 880,552 | 141,810 | 846,616 | 988,426 |
| 1998 | 130,346 | 228,366 | 358,712 | 164,682 | 179,971 | 502,065 | 846,718 | 136,361 | 814,087 | 950,448 |
| 1999 | 182,507 | 316,416 | 498,923 | 227,072 | 248,031 | 691,830 | 1,166,933 | 188,835 | 1,124,110 | 1,312,945 |
| 2000 | 238,571 | 364,418 | 602,989 | 260,766 | 284,875 | 794,730 | 1,340,371 | 218,359 | 1,364,019 | 1,582,378 |
| 2001 | 234,773 | 358,616 | 593,389 | 561,965 | 280,341 | 782,078 | 1,624,384 | 214,883 | 1,342,304 | 1,557,187 |
| 2002 | 257,520 | 391,851 | 649,371 | 610,230 | 288,977 | 806,174 | 1,705,381 | 221,503 | 1,383,661 | 1,605,164 |
| 2003 | 268,151 | 408,027 | 676,178 | 635,422 | 300,907 | 839,455 | 1,775,784 | 230,647 | 1,440,782 | 1,671,429 |
| 2004 | 268,425 | 408,444 | 676,869 | 636,070 | 301,214 | 840,312 | 1,777,596 | 230,883 | 1,442,252 | 1,673,135 |
| 2005 | 253,413 | 385,602 | 639,015 | 610,756 | 284,369 | 793,318 | 1,688,443 | 217,970 | 1,361,594 | 1,579,564 |
| 2006 | 274,219 | 417,261 | 691,480 | 660,900 | 307,716 | 858,451 | 1,827,067 | 235,866 | 1,473,385 | 1,709,251 |
| 2007 | 177,891 | 270,066 | 447,957 | 441,730 | 197,505 | 550,975 | 1,190,210 | 152,478 | 975,872 | 1,128,350 |
| 2008 | 254,590 | 386,862 | 641,452 | 773,686 | 288,283 | 803,089 | 1,865,058 | 223,659 | 1,369,892 | 1,593,551 |
| 2009 | 285,324 | 434,158 | 719,482 | 687,665 | 320,178 | 893,215 | 1,901,058 | 245,418 | 1,533,052 | 1,778,470 |
| 2010 | 473,086 | 719,862 | 1,192,948 | 1,140,193 | 530,875 | 1,481,007 | 3,152,075 | 406,919 | 2,541,897 | 2,948,816 |
| 2011 | 504,606 | 767,825 | 1,272,431 | 1,216,162 | 566,246 | 1,579,684 | 3,362,092 | 434,031 | 2,711,258 | 3,145,289 |
| 2012 | 505,152 | 768,655 | 1,273,807 | 1,217,477 | 566,858 | 1,581,392 | 3,365,727 | 434,500 | 2,714,189 | 3,148,689 |
| 2013 | 529,432 | 805,600 | 1,335,032 | 1,275,995 | 594,104 | 1,657,401 | 3,527,500 | 455,384 | 2,844,646 | 3,300,030 |
| 2014 | 548,226 | 834,198 | 1,382,424 | 1,321,291 | 615,194 | 1,716,237 | 3,652,722 | 471,550 | 2,945,627 | 3,417,177 |
| 2015 | 573,920 | 873,295 | 1,447,215 | 1,383,218 | 644,027 | 1,796,674 | 3,823,919 | 493,651 | 3,083,684 | 3,577,335 |
| 2016 | 579,134 | 881,229 | 1,460,363 | 1,395,783 | 649,878 | 1,812,996 | 3,858,657 | 498,135 | 3,111,697 | 3,609,832 |
| 2017 | 571,342 | 869,372 | 1,440,714 | 1,377,004 | 641,134 | 1,788,602 | 3,806,740 | 491,433 | 3,069,831 | 3,561,264 |
| 2018 | 510,300 | 776,488 | 1,286,788 | 1,229,884 | 572,635 | 1,597,507 | 3,400,026 | 438,928 | 2,741,848 | 3,180,776 |
| 2019 | 545,594 | 830,193 | 1,375,787 | 1,314,947 | 612,240 | 1,707,997 | 3,635,184 | 469,286 | 2,931,485 | 3,400,771 |
| 2020 | 504,952 | 768,350 | 1,273,302 | 1,216,995 | 566,634 | 1,580,765 | 3,364,394 | 434,328 | 2,713,114 | 3,147,442 |
| 2021 | 508,716 | 774,078 | 1,282,794 | 1,226,068 | 570,858 | 1,592,550 | 3,389,476 | 437,566 | 2,733,341 | 3,170,907 |
| 2022 | 493,275 | 750,582 | 1,243,857 | 1,188,852 | 553,530 | 1,544,211 | 3,286,593 | 424,284 | 2,650,374 | 3,074,658 |
| 2023 | 489,410 | 744,701 | 1,234,111 | 1,179,536 | 549,193 | 1,532,111 | 3,260,840 | 420,960 | 2,629,606 | 3,050,566 |
| 2024 | 471,831 | 717,953 | 1,189,784 | 1,137,171 | 529,468 | 1,477,081 | 3,143,720 | 405,840 | 2,535,158 | 2,940,998 |
| 2025 | 429,776 | 653,961 | 1,083,737 | 1,035,813 | 482,275 | 1,345,427 | 2,863,515 | 369,667 | 2,309,195 | 2,678,862 |
| 2026 | 391,689 | 596,006 | 987,695 | 944,018 | 439,536 | 1,226,194 | 2,609,748 | 336,907 | 2,104,552 | 2,441,459 |
| 2027 | 430,897 | 655,667 | 1,086,564 | 1,038,515 | 483,533 | 1,348,936 | 2,870,984 | 370,631 | 2,315,219 | 2,685,850 |
| 2028 | 330,999 | 503,658 | 834,657 | 797,747 | 371,432 | 1,036,201 | 2,205,380 | 284,705 | 1,778,462 | 2,063,167 |
| 2029 | 359,011 | 546,283 | 905,294 | 865,261 | 402,866 | 1,123,895 | 2,392,022 | 308,799 | 1,928,975 | 2,237,774 |
| 2030 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2031 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2032 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2033 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2034 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2035 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 13,401,996 | 20,527,596 | 33,929,592 | 30,688,007 | 15,323,841 | 42,807,676 | 88,819,524 | 11,743,583 | 70,280,232 | 82,023,815 |

TABLE B-22. Water System Revenue Bond Surcharge for Each Contractor

(in dollars)

Sheet 2 of 4

| Calendar Year | SAN JOAQUIN VALLEY AREA | | | | | | | | |
|------------------|--------------------------------------|---|---|--------------------------------|-------------------|-----------------------|-------------------------------|--|-------------|
| | Dudley Ridge Water District | Empire West Side Irrigation District | Future Contractor San Joaquin Valley | Kern County Water Agency | | County of Kings | Oak Flat Water District | Tulare Lake Basin Water Storage District | Total |
| | | | | Municipal and Industrial | Agri- cultural | | | | |
| | [11] | [12] | [13] | [14] | [15] | [16] | [17] | [18] | [19] |
| 1971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1972 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1973 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1974 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1975 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1976 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1977 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1978 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1979 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1980 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1981 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1982 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1983 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1984 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1985 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1986 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1987 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1988 | 33,986 | 1,657 | 0 | 67,288 | 726,501 | 2,228 | 2,851 | 66,748 | 901,259 |
| 1989 | 59,273 | 2,785 | 0 | 116,689 | 1,251,452 | 3,733 | 4,927 | 116,736 | 1,555,595 |
| 1990 | 53,349 | 2,419 | 0 | 287,811 | 947,351 | 3,248 | 4,367 | 109,118 | 1,407,663 |
| 1991 | 82,252 | 3,731 | 0 | 359,380 | 1,564,983 | 5,035 | 6,771 | 168,217 | 2,190,369 |
| 1992 | 112,566 | 5,127 | 0 | 452,691 | 2,153,423 | 6,927 | 9,285 | 230,217 | 2,970,236 |
| 1993 | 119,670 | 5,459 | 0 | 272,449 | 2,491,672 | 7,381 | 9,894 | 244,813 | 3,151,338 |
| 1994 | 118,265 | 5,379 | 0 | 244,671 | 2,485,820 | 7,300 | 9,766 | 241,933 | 3,113,134 |
| 1995 | 139,227 | 6,339 | 0 | 317,885 | 2,894,182 | 8,598 | 11,490 | 284,798 | 3,662,519 |
| 1996 | 169,333 | 7,703 | 0 | 354,341 | 2,722,241 | 10,460 | 13,978 | 346,366 | 3,624,422 |
| 1997 | 165,364 | 7,980 | 0 | 366,285 | 2,673,847 | 10,826 | 14,465 | 357,986 | 3,596,753 |
| 1998 | 159,011 | 7,672 | 0 | 352,211 | 2,571,110 | 10,410 | 13,909 | 344,232 | 3,458,555 |
| 1999 | 218,784 | 10,373 | 0 | 485,897 | 3,371,115 | 14,376 | 19,166 | 476,017 | 4,595,728 |
| 2000 | 251,339 | 11,735 | 0 | 557,296 | 3,620,348 | 16,500 | 21,990 | 546,406 | 5,025,614 |
| 2001 | 247,338 | 11,547 | 0 | 548,424 | 3,461,158 | 16,238 | 21,640 | 537,707 | 4,844,052 |
| 2002 | 273,542 | 11,904 | 0 | 565,321 | 3,496,023 | 16,737 | 22,306 | 521,659 | 4,907,492 |
| 2003 | 284,834 | 12,395 | 0 | 588,659 | 3,640,346 | 17,428 | 23,227 | 543,193 | 5,110,082 |
| 2004 | 285,125 | 12,408 | 0 | 589,259 | 3,644,059 | 17,446 | 23,251 | 543,748 | 5,115,296 |
| 2005 | 269,179 | 11,714 | 0 | 556,305 | 3,431,851 | 39,485 | 21,951 | 488,483 | 4,818,968 |
| 2006 | 291,279 | 12,676 | 0 | 601,979 | 3,713,614 | 42,726 | 23,753 | 528,589 | 5,214,616 |
| 2007 | 187,144 | 8,113 | 0 | 383,463 | 2,314,841 | 34,088 | 15,230 | 285,915 | 3,228,794 |
| 2008 | 271,383 | 11,832 | 0 | 563,171 | 3,478,837 | 41,080 | 22,094 | 445,805 | 4,834,202 |
| 2009 | 303,076 | 13,189 | 0 | 626,357 | 3,864,004 | 46,037 | 24,715 | 497,108 | 5,374,486 |
| 2010 | 445,696 | 21,868 | 0 | 1,038,540 | 6,293,469 | 76,333 | 40,978 | 764,088 | 8,680,972 |
| 2011 | 475,392 | 23,325 | 0 | 1,107,736 | 6,712,791 | 81,419 | 43,709 | 814,997 | 9,259,369 |
| 2012 | 475,906 | 23,350 | 0 | 1,108,933 | 6,720,046 | 81,507 | 43,756 | 815,878 | 9,269,376 |
| 2013 | 498,780 | 24,473 | 0 | 1,162,234 | 7,043,044 | 85,424 | 45,859 | 855,093 | 9,714,907 |
| 2014 | 516,486 | 25,341 | 0 | 1,203,492 | 7,293,064 | 88,457 | 47,487 | 885,448 | 10,059,775 |
| 2015 | 540,693 | 26,529 | 0 | 1,259,898 | 7,634,878 | 92,602 | 49,713 | 926,948 | 10,531,261 |
| 2016 | 545,605 | 26,770 | 0 | 1,271,343 | 7,704,236 | 93,444 | 50,164 | 935,368 | 10,626,930 |
| 2017 | 538,264 | 26,410 | 0 | 1,254,238 | 7,600,579 | 92,186 | 49,489 | 922,783 | 10,483,949 |
| 2018 | 480,755 | 23,588 | 0 | 1,120,234 | 6,788,529 | 82,337 | 44,202 | 824,193 | 9,363,838 |
| 2019 | 514,006 | 25,220 | 0 | 1,197,714 | 7,258,048 | 88,032 | 47,259 | 881,197 | 10,011,476 |
| 2020 | 475,717 | 23,341 | 0 | 1,108,494 | 6,717,385 | 81,474 | 43,739 | 815,555 | 9,265,705 |
| 2021 | 479,264 | 23,515 | 0 | 1,116,758 | 6,767,465 | 82,082 | 44,065 | 821,635 | 9,334,784 |
| 2022 | 464,716 | 22,801 | 0 | 1,082,861 | 6,562,048 | 79,590 | 42,727 | 796,696 | 9,051,439 |
| 2023 | 461,075 | 22,623 | 0 | 1,074,376 | 6,510,629 | 78,967 | 42,392 | 790,453 | 8,980,515 |
| 2024 | 444,514 | 21,810 | 0 | 1,035,787 | 6,276,785 | 76,130 | 40,870 | 762,062 | 8,657,958 |
| 2025 | 404,894 | 19,866 | 0 | 943,465 | 5,717,324 | 69,345 | 37,227 | 694,138 | 7,886,259 |
| 2026 | 369,012 | 18,106 | 0 | 859,855 | 5,210,651 | 63,199 | 33,928 | 632,623 | 7,187,374 |
| 2027 | 405,950 | 19,918 | 0 | 945,927 | 5,732,239 | 69,526 | 37,324 | 695,949 | 7,906,833 |
| 2028 | 311,835 | 15,300 | 0 | 726,624 | 4,403,284 | 53,407 | 28,671 | 534,601 | 6,073,722 |
| 2029 | 338,226 | 16,595 | 0 | 788,119 | 4,775,939 | 57,927 | 31,097 | 579,845 | 6,587,748 |
| 2030 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2031 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2032 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2033 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2034 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2035 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 13,282,105 | 634,886 | 0 | 30,664,460 | 190,241,211 | 1,951,675 | 1,185,682 | 23,675,344 | 261,635,363 |

TABLE B-22. Water System Revenue Bond Surcharge for Each Contractor

(in dollars)

Sheet 3 of 4

| Calendar Year | SOUTHERN CALIFORNIA AREA | | | | | | | | | |
|------------------|---|------------------------------------|--|---|---------------------------|---|---------------------------|-------------------------------|--|---|
| | Antelope Valley- East Kern Water Agency | Castaic Lake Water Agency | Coachella Valley Water District | Crestline Lake Arrowhead Water Agency | Desert Water Agency | Littlerock Creek Irrigation District | Mojave Water Agency | Palmdale Water District | San Bernardino Valley Municipal Water District | San Gabriel Valley Municipal Water District |
| | [20] | [21] | [22] | [23] | [24] | [25] | [26] | [27] | [28] | [29] |
| 1971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1972 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1973 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1974 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1975 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1976 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1977 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1978 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1979 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1980 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1981 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1982 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1983 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1984 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1985 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1986 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1987 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1988 | 64,266 | 57,111 | 27,032 | 7,656 | 44,492 | 2,154 | 55,996 | 16,240 | 151,182 | 39,907 |
| 1989 | 205,668 | 98,720 | 46,993 | 13,263 | 78,104 | 3,763 | 97,138 | 27,981 | 259,860 | 69,104 |
| 1990 | 185,010 | 87,808 | 42,449 | 11,905 | 69,970 | 3,385 | 87,327 | 24,956 | 231,650 | 61,851 |
| 1991 | 296,854 | 140,371 | 65,947 | 18,548 | 108,704 | 5,236 | 135,623 | 38,641 | 363,310 | 96,172 |
| 1992 | 402,015 | 234,421 | 89,358 | 25,192 | 147,297 | 7,053 | 183,813 | 52,160 | 491,537 | 130,372 |
| 1993 | 424,871 | 247,076 | 93,981 | 26,566 | 154,919 | 7,437 | 193,361 | 55,045 | 517,379 | 137,298 |
| 1994 | 424,023 | 247,222 | 94,502 | 26,865 | 155,776 | 7,431 | 194,191 | 54,968 | 525,394 | 139,422 |
| 1995 | 500,083 | 290,999 | 111,729 | 31,823 | 184,169 | 8,769 | 229,530 | 64,852 | 623,848 | 165,594 |
| 1996 | 606,387 | 353,131 | 135,428 | 38,635 | 223,236 | 10,640 | 278,178 | 78,696 | 760,333 | 201,821 |
| 1997 | 626,151 | 362,776 | 139,565 | 39,802 | 230,058 | 10,972 | 286,779 | 81,146 | 808,482 | 207,472 |
| 1998 | 602,091 | 348,838 | 134,202 | 38,273 | 221,218 | 10,550 | 275,761 | 78,028 | 777,418 | 199,501 |
| 1999 | 826,108 | 479,470 | 184,524 | 52,650 | 304,166 | 14,475 | 642,815 | 107,060 | 1,041,566 | 277,200 |
| 2000 | 940,325 | 1,150,965 | 210,453 | 60,212 | 346,906 | 16,486 | 736,157 | 121,898 | 1,191,538 | 316,860 |
| 2001 | 925,355 | 1,132,642 | 207,102 | 59,254 | 341,384 | 16,224 | 724,438 | 135,581 | 1,172,568 | 311,816 |
| 2002 | 974,814 | 1,167,539 | 213,483 | 61,079 | 351,902 | 16,724 | 746,758 | 139,071 | 1,208,696 | 321,423 |
| 2003 | 1,015,056 | 1,215,738 | 222,296 | 63,601 | 366,429 | 17,415 | 777,586 | 144,812 | 1,258,593 | 334,692 |
| 2004 | 1,016,092 | 1,216,978 | 222,523 | 63,666 | 366,803 | 17,432 | 778,379 | 144,960 | 1,259,877 | 335,033 |
| 2005 | 959,268 | 1,148,920 | 210,078 | 60,105 | 346,290 | 16,457 | 734,849 | 136,853 | 1,189,420 | 316,297 |
| 2006 | 1,038,026 | 1,243,248 | 1,213,645 | 65,040 | 501,286 | 17,809 | 795,182 | 148,089 | 1,287,074 | 342,266 |
| 2007 | 666,215 | 820,799 | 1,036,396 | 41,723 | 354,543 | 11,413 | 520,847 | 95,550 | 825,932 | 219,727 |
| 2008 | 999,433 | 1,167,531 | 1,157,440 | 61,924 | 478,719 | 17,175 | 757,686 | 144,009 | 1,367,672 | 325,069 |
| 2009 | 1,080,062 | 1,293,596 | 1,262,793 | 67,674 | 521,586 | 18,529 | 827,383 | 154,087 | 1,339,196 | 356,126 |
| 2010 | 1,790,812 | 2,144,863 | 2,223,874 | 112,208 | 908,184 | 30,723 | 1,428,677 | 255,484 | 2,220,471 | 590,480 |
| 2011 | 1,910,130 | 2,287,771 | 2,372,046 | 119,684 | 968,694 | 32,770 | 1,523,867 | 272,507 | 2,368,417 | 629,822 |
| 2012 | 1,912,195 | 2,290,244 | 2,374,610 | 119,813 | 969,741 | 32,806 | 1,525,514 | 272,801 | 2,370,977 | 630,503 |
| 2013 | 2,004,104 | 2,400,324 | 2,488,745 | 125,572 | 1,016,352 | 34,382 | 1,598,838 | 285,914 | 2,484,938 | 660,808 |
| 2014 | 2,075,247 | 2,485,533 | 2,577,093 | 130,030 | 1,052,431 | 35,603 | 1,655,594 | 296,063 | 2,573,150 | 684,266 |
| 2015 | 2,172,511 | 2,602,026 | 2,697,877 | 136,124 | 1,101,757 | 37,272 | 1,733,190 | 309,939 | 2,693,749 | 716,336 |
| 2016 | 2,192,247 | 2,625,664 | 2,722,386 | 137,361 | 1,111,766 | 37,610 | 1,748,934 | 312,755 | 2,718,220 | 722,844 |
| 2017 | 2,162,751 | 2,590,336 | 2,685,757 | 135,513 | 1,096,807 | 37,104 | 1,725,403 | 308,547 | 2,681,648 | 713,118 |
| 2018 | 1,931,681 | 2,313,583 | 2,398,809 | 121,034 | 979,624 | 33,140 | 1,541,060 | 275,582 | 2,395,139 | 636,928 |
| 2019 | 2,065,283 | 2,473,599 | 2,564,720 | 129,406 | 1,047,378 | 35,432 | 1,647,646 | 294,642 | 2,560,796 | 680,980 |
| 2020 | 1,911,437 | 2,289,337 | 2,373,670 | 119,766 | 969,357 | 32,793 | 1,524,910 | 272,693 | 2,370,038 | 630,253 |
| 2021 | 1,925,688 | 2,306,405 | 2,391,366 | 120,659 | 976,584 | 33,037 | 1,536,279 | 274,726 | 2,387,707 | 634,952 |
| 2022 | 1,867,236 | 2,236,397 | 2,318,779 | 116,996 | 946,941 | 32,034 | 1,489,647 | 266,387 | 2,315,232 | 615,679 |
| 2023 | 1,852,605 | 2,218,873 | 2,300,610 | 116,080 | 939,521 | 31,783 | 1,477,974 | 264,300 | 2,297,090 | 610,854 |
| 2024 | 1,786,064 | 2,139,177 | 2,217,978 | 111,910 | 905,776 | 30,642 | 1,424,890 | 254,807 | 2,214,585 | 588,914 |
| 2025 | 1,626,869 | 1,948,509 | 2,020,286 | 101,936 | 825,043 | 27,911 | 1,297,887 | 232,096 | 2,017,195 | 536,423 |
| 2026 | 1,482,695 | 1,775,830 | 1,841,247 | 92,902 | 751,927 | 25,437 | 1,182,867 | 211,527 | 1,838,430 | 488,885 |
| 2027 | 1,631,113 | 1,953,592 | 2,025,556 | 102,202 | 827,195 | 27,983 | 1,301,272 | 232,701 | 2,022,457 | 537,823 |
| 2028 | 1,252,958 | 1,500,674 | 1,555,954 | 78,507 | 635,419 | 21,496 | 999,587 | 178,752 | 1,553,573 | 413,134 |
| 2029 | 1,358,997 | 1,627,677 | 1,687,636 | 85,151 | 689,195 | 23,315 | 1,084,183 | 193,880 | 1,685,054 | 448,099 |
| 2030 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2031 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2032 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2033 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2034 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2035 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 51,690,796 | 58,716,313 | 52,960,918 | 3,248,310 | 24,617,649 | 890,802 | 39,507,996 | 7,310,786 | 64,421,391 | 17,076,124 |

TABLE B-22. Water System Revenue Bond Surcharge for Each Contractor

(in dollars)

Sheet 4 of 4

| Calendar Year | SOUTHERN CALIFORNIA AREA (continued) | | | | FEATHER RIVER AREA | | | | South Bay Area Future Contractor | GRAND TOTAL |
|------------------|--|--|---|---------------|----------------------------|-----------------------|----------------------------|-----------|---|----------------|
| | San Gorgonio Pass Water Agency | The Metropolitan Water District of Southern California | Ventura County Flood Control District | Total | City of Yuba City | County of Butte | Plumas County FC&WCD | Total | | |
| | [30] | [31] | [32] | [33] | [34] | [35] | [36] | [37] | [38] | [39] |
| 1971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1972 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1973 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1974 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1975 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1976 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1977 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1978 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1979 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1980 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1981 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1982 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1983 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1984 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1985 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1986 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1987 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1988 | 24,019 | 2,642,354 | 18,118 | 3,150,527 | 1,336 | 552 | 853 | 2,741 | 0 | 4,317,328 |
| 1989 | 42,040 | 4,587,641 | 34,565 | 5,564,840 | 0 | 918 | 1,454 | 2,372 | 0 | 7,583,021 |
| 1990 | 38,023 | 4,037,980 | 34,994 | 4,917,308 | 2,535 | 800 | 1,283 | 4,618 | 0 | 6,750,020 |
| 1991 | 59,122 | 6,259,893 | 54,115 | 7,642,536 | 9,945 | 1,243 | 2,027 | 13,215 | 0 | 10,510,679 |
| 1992 | 80,131 | 8,435,312 | 72,892 | 10,351,553 | 13,671 | 1,710 | 2,806 | 18,187 | 0 | 14,255,669 |
| 1993 | 84,371 | 8,885,273 | 76,858 | 10,904,435 | 14,608 | 1,827 | 3,026 | 19,461 | 0 | 15,068,309 |
| 1994 | 85,698 | 8,926,755 | 76,794 | 10,959,041 | 14,409 | 1,801 | 3,070 | 19,280 | 0 | 15,145,690 |
| 1995 | 101,792 | 10,539,433 | 90,436 | 12,943,057 | 16,957 | 2,119 | 3,704 | 22,780 | 0 | 18,013,188 |
| 1996 | 124,074 | 12,810,361 | 109,783 | 15,730,703 | 20,640 | 2,580 | 4,621 | 27,841 | 0 | 21,369,059 |
| 1997 | 28,259 | 13,168,230 | 112,960 | 16,102,652 | 21,382 | 2,674 | 4,872 | 28,928 | 0 | 21,970,359 |
| 1998 | 27,174 | 12,662,268 | 108,619 | 15,483,941 | 20,562 | 2,571 | 4,685 | 27,818 | 0 | 21,126,192 |
| 1999 | 53,545 | 17,454,651 | 149,123 | 21,587,353 | 28,348 | 3,543 | 6,765 | 38,656 | 0 | 29,200,538 |
| 2000 | 70,117 | 19,805,800 | 168,259 | 25,135,976 | 32,271 | 9,794 | 7,996 | 50,061 | 0 | 33,737,389 |
| 2001 | 69,001 | 19,490,499 | 165,580 | 24,751,444 | 31,757 | 9,638 | 7,869 | 49,264 | 0 | 33,419,720 |
| 2002 | 71,126 | 20,091,004 | 170,682 | 25,534,301 | 32,736 | 9,935 | 8,112 | 50,783 | 0 | 34,452,492 |
| 2003 | 74,063 | 20,920,403 | 177,728 | 26,588,412 | 34,087 | 10,345 | 8,446 | 52,878 | 0 | 35,874,763 |
| 2004 | 74,138 | 20,941,743 | 177,910 | 26,615,534 | 34,121 | 10,356 | 8,456 | 52,933 | 0 | 35,911,363 |
| 2005 | 69,992 | 19,770,593 | 167,960 | 25,127,082 | 32,213 | 9,776 | 7,983 | 49,972 | 0 | 33,903,044 |
| 2006 | 75,738 | 20,330,228 | 181,750 | 27,239,381 | 34,858 | 10,579 | 8,638 | 54,075 | 0 | 36,735,870 |
| 2007 | 45,192 | 12,752,863 | 116,415 | 17,507,615 | 22,362 | 7,007 | 5,579 | 34,948 | 0 | 23,537,874 |
| 2008 | 250,631 | 19,303,204 | 173,561 | 26,204,054 | 32,180 | 9,751 | 7,973 | 49,904 | 0 | 35,188,221 |
| 2009 | 78,805 | 21,153,536 | 189,110 | 28,342,483 | 36,270 | 11,008 | 8,988 | 56,266 | 0 | 38,172,245 |
| 2010 | 130,664 | 35,073,900 | 313,557 | 47,223,897 | 60,138 | 18,251 | 14,902 | 93,291 | 0 | 63,291,999 |
| 2011 | 139,370 | 37,410,810 | 334,448 | 50,370,336 | 64,144 | 19,467 | 15,895 | 99,506 | 0 | 67,509,023 |
| 2012 | 139,521 | 37,451,244 | 334,810 | 50,424,779 | 64,214 | 19,488 | 15,912 | 99,614 | 0 | 67,581,992 |
| 2013 | 146,227 | 39,251,334 | 350,903 | 52,848,441 | 67,300 | 20,425 | 16,677 | 104,402 | 0 | 70,830,312 |
| 2014 | 151,418 | 40,644,705 | 363,359 | 54,724,492 | 69,689 | 21,150 | 17,269 | 108,108 | 0 | 73,344,698 |
| 2015 | 158,515 | 42,549,660 | 380,389 | 57,289,345 | 72,955 | 22,141 | 18,078 | 113,174 | 0 | 76,782,249 |
| 2016 | 159,955 | 42,936,196 | 383,845 | 57,809,783 | 73,618 | 22,342 | 18,243 | 114,203 | 0 | 77,479,768 |
| 2017 | 157,803 | 42,358,506 | 378,680 | 57,031,973 | 72,628 | 22,041 | 17,997 | 112,666 | 0 | 76,437,306 |
| 2018 | 140,943 | 37,832,899 | 338,222 | 50,938,644 | 64,868 | 19,687 | 16,074 | 100,629 | 0 | 68,270,701 |
| 2019 | 150,691 | 40,449,561 | 361,615 | 54,461,749 | 69,355 | 21,048 | 17,186 | 107,589 | 0 | 72,992,556 |
| 2020 | 139,466 | 37,436,410 | 334,677 | 50,404,807 | 64,188 | 19,480 | 15,906 | 99,574 | 0 | 67,555,224 |
| 2021 | 140,506 | 37,715,514 | 337,173 | 50,780,596 | 64,667 | 19,625 | 16,024 | 100,316 | 0 | 68,058,873 |
| 2022 | 136,241 | 36,570,710 | 326,938 | 49,239,217 | 62,704 | 19,030 | 15,538 | 97,272 | 0 | 65,993,036 |
| 2023 | 135,173 | 36,284,148 | 324,376 | 48,853,387 | 62,213 | 18,881 | 15,416 | 96,510 | 0 | 65,475,929 |
| 2024 | 130,318 | 34,980,920 | 312,726 | 47,098,707 | 59,978 | 18,202 | 14,863 | 93,043 | 0 | 63,124,210 |
| 2025 | 118,703 | 31,863,013 | 284,852 | 42,900,723 | 54,632 | 16,580 | 13,538 | 84,750 | 0 | 57,497,846 |
| 2026 | 108,183 | 29,039,288 | 259,608 | 39,098,826 | 49,791 | 15,111 | 12,338 | 77,240 | 0 | 52,402,342 |
| 2027 | 119,012 | 31,946,132 | 285,595 | 43,012,633 | 54,775 | 16,623 | 13,573 | 84,971 | 0 | 57,647,835 |
| 2028 | 91,421 | 24,539,782 | 219,383 | 33,040,640 | 42,076 | 12,769 | 10,426 | 65,271 | 0 | 44,282,837 |
| 2029 | 99,158 | 26,616,607 | 237,950 | 35,836,902 | 45,637 | 13,850 | 11,309 | 70,796 | 0 | 48,030,536 |
| 2030 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2031 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2032 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2033 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2034 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2035 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 4,320,339 | 1,027,921,363 | 9,091,318 | 1,361,774,105 | 1,726,818 | 496,718 | 426,370 | 2,649,906 | 0 | 1,830,832,305 |

TABLE B-23. Total Transportation and Delta Water Charge for Each Contractor

| Calendar Year | NORTH BAY AREA | | | SOUTH BAY AREA | | | | CENTRAL COASTAL AREA | | |
|----------------------|--------------------------|------------------------|-------------|--|--|--|---------------|--|--------------------------------------|---------------|
| | Napa County FC&WCD | Solano County WA | Total | Alameda County FC&WCD, Zone 7 | Alameda County Water District | Santa Clara Valley Water District | Total | San Luis Obispo County FC&WCD | Santa Barbara County FC&WCD | Total |
| | [1] | [2] | [3] | [4] | [5] | [6] | [7] | [8] | [9] | [10] |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1962 | 0 | 0 | 0 | 11,750 | 43,787 | 21,132 | 76,669 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 198,673 | 190,236 | 447,594 | 837,503 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 263,210 | 277,398 | 621,174 | 1,161,782 | 6,694 | 21,659 | 28,353 |
| 1965 | 0 | 0 | 0 | 373,722 | 404,239 | 1,157,791 | 1,935,753 | 13,751 | 36,017 | 49,768 |
| 1966 | 18,057 | 0 | 18,057 | 419,362 | 421,628 | 1,412,600 | 2,253,589 | 26,516 | 61,329 | 87,845 |
| 1967 | 41,560 | 0 | 41,560 | 552,988 | 548,387 | 1,862,808 | 2,964,183 | 56,451 | 118,225 | 174,675 |
| 1968 | 128,588 | 0 | 128,588 | 682,774 | 633,066 | 2,178,036 | 3,493,877 | 115,927 | 229,740 | 345,667 |
| 1969 | 254,662 | 0 | 254,662 | 817,386 | 583,307 | 2,298,275 | 3,698,969 | 185,118 | 358,783 | 543,901 |
| 1970 | 277,493 | 0 | 277,493 | 903,703 | 640,164 | 2,787,493 | 4,331,360 | 200,110 | 387,595 | 587,705 |
| 1971 | 227,419 | 0 | 227,419 | 845,179 | 675,059 | 2,806,541 | 4,326,780 | 202,373 | 392,830 | 595,203 |
| 1972 | 224,922 | 0 | 224,922 | 929,193 | 822,262 | 3,027,272 | 4,778,727 | 209,016 | 406,506 | 615,521 |
| 1973 | 221,035 | 31,353 | 252,388 | 915,641 | 716,357 | 3,120,308 | 4,752,307 | 206,516 | 402,639 | 609,155 |
| 1974 | 240,442 | 32,924 | 273,366 | 956,237 | 746,798 | 3,324,543 | 5,027,579 | 208,503 | 407,005 | 615,508 |
| 1975 | 237,400 | 36,276 | 273,676 | 1,014,631 | 792,919 | 3,213,566 | 5,021,116 | 225,853 | 439,787 | 665,639 |
| 1976 | 271,231 | 40,819 | 312,050 | 1,127,690 | 943,328 | 3,362,062 | 5,433,080 | 228,933 | 447,212 | 676,146 |
| 1977 | 233,565 | 45,078 | 338,643 | 1,096,316 | 922,067 | 3,302,979 | 5,321,362 | 238,656 | 468,632 | 707,288 |
| 1978 | 273,807 | 49,159 | 322,966 | 1,185,114 | 935,682 | 3,712,097 | 5,832,893 | 245,286 | 484,166 | 729,452 |
| 1979 | 289,415 | 53,320 | 342,735 | 1,281,689 | 1,009,429 | 3,819,046 | 6,110,164 | 243,065 | 483,342 | 726,406 |
| 1980 | 310,779 | 86,049 | 396,827 | 1,434,664 | 1,173,659 | 4,118,582 | 6,726,905 | 282,209 | 540,456 | 822,665 |
| 1981 | 347,710 | 112,817 | 460,527 | 1,543,195 | 1,348,984 | 4,507,072 | 7,399,251 | 307,018 | 596,566 | 903,584 |
| 1982 | 438,260 | 141,798 | 580,058 | 1,623,523 | 1,369,396 | 4,940,900 | 7,933,820 | 328,168 | 682,443 | 1,010,611 |
| 1983 | 354,703 | 163,242 | 517,946 | 1,493,811 | 1,259,998 | 4,909,747 | 7,663,557 | 357,171 | 701,981 | 1,059,152 |
| 1984 | 467,232 | 246,625 | 713,856 | 1,803,845 | 1,476,252 | 6,869,751 | 10,151,847 | 409,482 | 800,953 | 1,210,435 |
| 1985 | 735,929 | 386,187 | 1,122,116 | 2,301,682 | 2,224,952 | 7,795,900 | 12,322,615 | 500,648 | 969,626 | 1,470,474 |
| 1986 | 1,119,826 | 714,023 | 1,833,849 | 2,170,310 | 2,013,959 | 8,193,339 | 12,377,608 | 536,703 | 1,037,924 | 1,574,627 |
| 1987 | 1,773,371 | 1,581,733 | 3,355,104 | 2,666,831 | 2,505,517 | 7,979,748 | 13,152,096 | 570,595 | 1,148,863 | 1,719,458 |
| 1988 | 2,349,015 | 2,524,068 | 4,873,083 | 2,728,004 | 2,774,284 | 7,829,776 | 13,332,063 | 673,020 | 1,439,487 | 2,112,507 |
| 1989 | 2,548,170 | 3,700,620 | 6,248,790 | 2,711,966 | 2,515,323 | 7,578,335 | 12,805,624 | 772,517 | 1,814,603 | 2,587,120 |
| 1990 | 2,899,410 | 3,848,146 | 6,747,556 | 3,147,272 | 2,929,625 | 8,354,874 | 14,431,772 | 933,311 | 2,046,195 | 2,979,506 |
| 1991 | 2,940,701 | 4,169,425 | 7,110,126 | 2,419,200 | 2,384,093 | 6,430,306 | 11,233,598 | 979,649 | 2,366,642 | 3,346,291 |
| 1992 | 2,797,105 | 4,144,190 | 6,941,295 | 2,893,665 | 2,926,955 | 7,656,397 | 13,477,018 | 1,118,743 | 2,526,627 | 3,645,370 |
| 1993 | 2,854,875 | 4,171,687 | 7,026,562 | 3,750,438 | 2,977,192 | 8,849,446 | 15,577,076 | 1,185,596 | 2,725,769 | 3,911,365 |
| 1994 | 2,987,314 | 4,224,485 | 7,211,799 | 3,787,528 | 3,586,091 | 9,612,990 | 16,986,609 | 1,335,886 | 3,517,570 | 4,853,456 |
| 1995 | 2,960,697 | 4,404,411 | 7,365,108 | 4,036,165 | 3,313,187 | 8,393,269 | 15,742,621 | 1,647,663 | 6,194,234 | 7,841,898 |
| 1996 | 3,044,394 | 4,897,402 | 7,941,796 | 3,644,002 | 3,178,232 | 9,227,992 | 16,050,226 | 2,591,704 | 15,229,004 | 17,820,707 |
| 1997 | 3,027,378 | 4,733,999 | 7,761,378 | 3,870,510 | 3,145,383 | 9,337,451 | 16,353,344 | 3,002,323 | 23,731,434 | 26,733,758 |
| 1998 | 2,935,435 | 4,588,088 | 7,523,523 | 3,477,349 | 3,201,439 | 9,077,238 | 15,756,026 | 3,254,384 | 28,387,340 | 31,641,724 |
| 1999 | 3,155,494 | 5,070,341 | 8,225,834 | 4,179,048 | 3,670,183 | 11,373,954 | 19,223,185 | 3,801,837 | 29,648,642 | 33,450,479 |
| 2000 | 3,461,844 | 5,619,465 | 9,081,309 | 5,799,808 | 3,592,233 | 10,211,806 | 19,603,848 | 3,777,904 | 30,349,922 | 34,127,826 |
| 2001 | 4,079,685 | 6,371,414 | 10,451,099 | 9,836,052 | 4,092,646 | 11,655,312 | 25,584,010 | 4,330,579 | 32,492,103 | 36,822,682 |
| 2002 | 4,325,550 | 6,567,226 | 10,892,776 | 13,361,328 | 4,092,627 | 13,170,947 | 30,624,901 | 4,058,673 | 32,167,579 | 36,226,253 |
| 2003 | 4,450,589 | 6,924,021 | 11,374,610 | 10,023,791 | 3,822,250 | 11,988,300 | 25,834,341 | 4,144,029 | 32,477,596 | 36,621,625 |
| 2004 | 4,932,725 | 7,362,448 | 12,295,173 | 8,221,205 | 4,119,626 | 11,442,257 | 23,783,088 | 4,155,828 | 32,910,105 | 37,065,934 |
| 2005 | 4,300,929 | 6,673,996 | 10,974,925 | 8,312,015 | 4,281,943 | 12,225,767 | 24,819,726 | 4,289,187 | 32,956,781 | 37,245,968 |
| 2006 | 4,243,979 | 6,223,668 | 10,467,646 | 8,227,807 | 4,234,597 | 12,264,469 | 24,726,873 | 4,200,140 | 33,025,666 | 37,225,806 |
| 2007 | 4,668,642 | 7,349,708 | 12,018,349 | 9,300,738 | 4,759,602 | 13,510,810 | 27,571,149 | 4,464,163 | 34,845,544 | 39,309,708 |
| 2008 | 5,229,967 | 6,833,446 | 12,063,413 | 10,256,337 | 5,011,283 | 13,618,771 | 28,886,391 | 5,027,753 | 36,311,104 | 41,338,857 |
| 2009 | 5,901,721 | 6,821,745 | 12,723,465 | 9,410,153 | 4,799,818 | 13,903,540 | 28,113,511 | 5,036,296 | 35,741,668 | 40,777,965 |
| 2010 | 7,632,330 | 8,664,072 | 16,296,402 | 12,931,894 | 5,739,291 | 16,767,606 | 35,438,791 | 5,856,464 | 39,669,078 | 45,525,543 |
| 2011 | 8,141,876 | 9,179,847 | 17,321,723 | 14,225,354 | 6,794,919 | 19,561,427 | 40,581,700 | 5,858,745 | 43,736,136 | 49,594,880 |
| 2012 | 7,906,654 | 8,911,778 | 16,818,432 | 14,152,221 | 6,900,336 | 19,164,967 | 40,217,524 | 5,521,886 | 40,963,869 | 46,485,755 |
| 2013 | 7,105,764 | 8,403,878 | 15,509,641 | 12,841,182 | 6,327,453 | 17,117,142 | 36,285,778 | 5,585,328 | 41,318,419 | 46,903,747 |
| 2014 | 7,051,382 | 8,442,231 | 15,493,613 | 12,555,624 | 6,130,394 | 16,697,144 | 35,383,161 | 5,649,577 | 40,869,603 | 46,519,180 |
| 2015 | 7,416,004 | 8,693,889 | 16,109,893 | 13,437,098 | 6,503,664 | 17,771,015 | 37,711,777 | 7,692,600 | 40,997,414 | 48,690,014 |
| 2016 | 7,413,586 | 8,724,793 | 16,138,379 | 13,443,892 | 6,496,044 | 17,656,326 | 37,596,262 | 7,694,100 | 41,138,058 | 48,832,158 |
| 2017 | 7,393,636 | 8,737,212 | 16,130,848 | 13,332,351 | 6,444,665 | 17,490,131 | 37,267,147 | 7,649,258 | 41,147,086 | 48,796,344 |
| 2018 | 7,246,793 | 8,662,079 | 15,908,872 | 13,184,693 | 6,398,353 | 17,332,408 | 36,915,454 | 7,573,565 | 40,899,919 | 48,473,484 |
| 2019 | 7,246,090 | 8,739,452 | 15,985,542 | 13,123,334 | 6,378,730 | 17,282,863 | 36,784,928 | 7,573,645 | 41,074,473 | 48,648,119 |
| 2020 | 7,215,628 | 8,701,938 | 15,917,567 | 13,010,308 | 6,327,594 | 17,140,322 | 36,478,225 | 7,547,073 | 40,912,383 | 48,459,455 |
| 2021 | 7,235,541 | 8,734,964 | 15,970,505 | 13,088,466 | 6,366,368 | 17,244,424 | 36,699,258 | 7,584,369 | 41,036,145 | 48,620,513 |
| 2022 | 7,231,915 | 8,735,444 | 15,967,359 | 13,074,181 | 6,359,245 | 17,220,419 | 36,653,845 | 7,579,828 | 41,010,750 | 48,590,578 |
| 2023 | 7,237,556 | 8,718,350 | 15,955,906 | 13,108,762 | 6,376,641 | 17,261,861 | 36,747,264 | 7,586,816 | 41,051,527 | 48,638,343 |
| 2024 | 7,228,653 | 8,713,299 | 15,941,952 | 13,046,561 | 6,344,810 | 17,175,414 | 36,566,785 | 7,562,939 | 40,984,406 | 48,547,345 |
| 2025 | 7,185,958 | 8,667,220 | 15,853,178 | 12,999,538 | 6,324,790 | 17,112,062 | 36,436,390 | 7,536,380 | 40,819,561 | 48,355,941 |
| 2026 | 7,157,399 | 8,630,101 | 15,787,499 | 13,010,876 | 6,333,786 | 17,128,108 | 36,472,770 | 7,538,926 | 40,722,263 | 48,261,189 |
| 2027 | 7,208,622 | 8,711,415 | 15,920,037 | 13,046,314 | 6,345,206 | 17,164,886 | 36,556,406 | 7,559,455 | 40,950,722 | 48,510,177 |
| 2028 | 7,119,222 | 8,580,627 | 15,699,849 | 12,884,394 | 6,272,087 | 16,953,194 | 36,109,675 | 7,495,638 | 40,496,523 | 47,992,161 |
| 2029 | 7,158,233 | 8,645,058 | 15,803,291 | 12,927,330 | 6,288,778 | 17,002,323 | 36,218,431 | 7,517,127 | 40,685,229 | 48,202,356 |
| 2030 | 6,802,319 | 8,109,125 | 14,911,444 | 12,113,507 | 5,910,807 | 15,943,731 | 33,968,044 | 7,225,825 | 38,830,512 | 46,056,337 |
| 2031 | 6,802,254 | 8,114,768 | 14,917,022 | 12,191,858 | 5,950,240 | 16,044,191 | 34,186,289 | 7,255,400 | 38,917,481 | 46,172,881 |
| 2032 | 6,804,461 | 8,120,801 | 14,925,262 | 12,165,624 | 5,933,807 | 16,005,491 | 34,104,923 | 7,247,080 | 38,955,436 | 46,202,516 |
| 2033 | 6,788,066 | 8,100,605 | 14,888,672 | 12,283,213 | 5,994,575 | 16,158,764 | 34,436,552 | 7,292,108 | 39,088,848 | 46,380,957 |
| 2034 | 6,730,804 | 8,051,526 | 14,782,330 | 12,246,043 | 5,972,064 | 16,104,653 | 34,322,760 | 7,283,029 | 39,118,290 | 46,401,319 |
| 2035 | 6,598,678 | 7,933,057 | 14,531,735 | 12,184,724 | 5,939,821 | 16,015,926 | 34,140,471 | 7,276,545 | 39,153,371 | 46,429,916 |
| TOTAL | 275,702,446 | 343,372,931 | 619,075,377 | 498,617,847 | 267,243,910 | 764,021,244 | 1,529,883,001 | 256,429,654 | 1,519,077,597 | 1,775,507,251 |

TABLE B-23. Total Transportation and Delta Water Charge for Each Contractor

| (in dollars) | | | | | | | | | | Sheet 2 of 4 |
|-------------------------|--------------------------------------|---|---|--------------------------------|-------------------|-----------------------|-------------------------------|---|---------------|--------------|
| SAN JOAQUIN VALLEY AREA | | | | | | | | | | |
| Calendar Year | Dudley Ridge Water District | Empire West Side Irrigation District | Future Contractor San Joaquin Valley | Kern County Water Agency | | County of Kings | Oak Flat Water District | Tulare Lake Basin Water Storage District | Total | |
| | | | | Municipal and Industrial | Agri- cultural | | | | | |
| | [11] | [12] | [13] | [14] | [15] | [16] | [17] | [18] | [19] | |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 1964 | 0 | 0 | 2,724 | 0 | 0 | 0 | 0 | 0 | 2,724 | |
| 1965 | 0 | 0 | 6,027 | 73,544 | 0 | 0 | 0 | 0 | 79,571 | |
| 1966 | 0 | 0 | 12,035 | 137,284 | 0 | 0 | 0 | 0 | 149,319 | |
| 1967 | 0 | 0 | 26,249 | 267,525 | 0 | 0 | 0 | 0 | 293,774 | |
| 1968 | 225,316 | 19,377 | 54,573 | 445,315 | 1,709,997 | 16,944 | 19,667 | 307,613 | 2,798,801 | |
| 1969 | 241,494 | 10,924 | 87,557 | 524,952 | 2,729,959 | 16,821 | 19,403 | 459,907 | 4,091,018 | |
| 1970 | 306,650 | 34,360 | 94,656 | 573,846 | 3,880,027 | 21,431 | 30,425 | 522,096 | 5,463,491 | |
| 1971 | 328,123 | 37,088 | 95,676 | 605,729 | 5,201,516 | 27,171 | 34,709 | 713,399 | 7,043,411 | |
| 1972 | 381,852 | 40,349 | 98,769 | 631,452 | 7,170,430 | 26,469 | 63,867 | 1,987,698 | 10,400,887 | |
| 1973 | 399,229 | 38,971 | 97,531 | 1,025,724 | 7,300,919 | 28,813 | 39,297 | 782,954 | 9,713,437 | |
| 1974 | 507,882 | 40,185 | 98,440 | 1,144,626 | 8,012,245 | 29,540 | 42,598 | 1,043,961 | 10,919,478 | |
| 1975 | 680,542 | 40,634 | 106,683 | 1,197,000 | 9,394,241 | 31,236 | 48,215 | 1,557,384 | 13,055,935 | |
| 1976 | 719,910 | 43,155 | 108,064 | 1,323,673 | 10,639,312 | 32,663 | 52,155 | 1,442,790 | 14,361,722 | |
| 1977 | 580,166 | 39,072 | 112,534 | 1,367,237 | 10,954,198 | 34,430 | 54,258 | 1,138,692 | 14,280,586 | |
| 1978 | 698,745 | 36,029 | 115,500 | 1,565,716 | 13,288,111 | 38,924 | 59,076 | 1,172,739 | 16,974,839 | |
| 1979 | 782,161 | 47,908 | 114,232 | 1,668,783 | 15,365,389 | 43,061 | 70,669 | 1,726,838 | 19,819,041 | |
| 1980 | 963,156 | 49,643 | 125,929 | 1,770,094 | 17,006,130 | 48,017 | 94,999 | 1,673,087 | 21,731,055 | |
| 1981 | 1,212,095 | 84,009 | 134,147 | 2,430,626 | 22,609,297 | 66,491 | 100,683 | 2,284,206 | 28,921,555 | |
| 1982 | 1,248,211 | 70,203 | 135,036 | 2,523,485 | 25,005,724 | 70,658 | 108,332 | 2,278,969 | 31,440,618 | |
| 1983 | 1,182,512 | 52,553 | 149,180 | 2,084,871 | 24,653,054 | 75,438 | 87,475 | 506,871 | 28,791,953 | |
| 1984 | 1,492,037 | 28,535 | 164,483 | 3,396,201 | 33,381,072 | 94,317 | 121,475 | 1,542,072 | 40,220,192 | |
| 1985 | 1,767,877 | 129,965 | 184,883 | 3,891,023 | 39,351,586 | 117,579 | 139,556 | 2,816,470 | 48,398,939 | |
| 1986 | 2,009,753 | 79,342 | 180,423 | 4,079,656 | 43,452,535 | 136,711 | 153,214 | 3,655,144 | 53,746,777 | |
| 1987 | 1,884,994 | 95,260 | 179,850 | 4,570,657 | 42,725,605 | 137,328 | 151,455 | 3,748,115 | 53,493,263 | |
| 1988 | 1,970,010 | 109,638 | 193,712 | 4,734,317 | 44,663,070 | 138,274 | 146,616 | 3,902,669 | 55,858,306 | |
| 1989 | 2,124,699 | 101,765 | 187,891 | 4,677,170 | 46,855,504 | 137,082 | 166,444 | 4,384,137 | 58,634,692 | |
| 1990 | 1,883,892 | 86,969 | 221,368 | 4,827,700 | 45,632,504 | 121,149 | 148,748 | 3,962,264 | 56,884,594 | |
| 1991 | 1,689,542 | 80,258 | 220,258 | 4,535,666 | 37,508,159 | 103,904 | 134,758 | 3,503,274 | 47,775,820 | |
| 1992 | 2,235,298 | 105,077 | 241,431 | 5,549,954 | 48,705,255 | 143,779 | 175,741 | 4,542,104 | 61,698,639 | |
| 1993 | 2,457,453 | 120,080 | 264,933 | 5,805,843 | 54,606,422 | 161,518 | 195,306 | 5,295,958 | 68,907,513 | |
| 1994 | 2,262,276 | 107,585 | 306,333 | 5,210,088 | 52,076,962 | 145,620 | 178,118 | 4,668,658 | 64,955,641 | |
| 1995 | 2,858,737 | 115,502 | 304,270 | 6,621,268 | 60,537,118 | 180,796 | 210,451 | 5,527,492 | 76,355,635 | |
| 1996 | 2,051,267 | 125,192 | 389,175 | 6,670,890 | 58,618,470 | 178,468 | 190,063 | 7,093,257 | 75,316,782 | |
| 1997 | 2,762,530 | 100,597 | 276,653 | 6,521,730 | 57,397,061 | 138,112 | 212,263 | 4,715,388 | 72,124,333 | |
| 1998 | 2,608,210 | 119,889 | 381,817 | 5,732,926 | 53,964,326 | 143,428 | 203,872 | 4,968,688 | 68,123,156 | |
| 1999 | 2,697,038 | 135,823 | 366,546 | 6,352,172 | 57,455,294 | 183,762 | 218,561 | 7,421,897 | 74,831,093 | |
| 2000 | 2,589,879 | 120,590 | 303,274 | 6,326,341 | 50,980,639 | 173,924 | 213,051 | 6,158,447 | 66,866,145 | |
| 2001 | 3,275,064 | 145,774 | 328,166 | 5,933,383 | 58,346,917 | 192,414 | 259,725 | 6,447,046 | 74,928,488 | |
| 2002 | 2,987,047 | 127,756 | 321,653 | 6,807,269 | 52,881,065 | 187,422 | 238,794 | 5,786,531 | 69,337,537 | |
| 2003 | 3,041,316 | 131,784 | 342,603 | 7,134,542 | 55,546,866 | 202,532 | 238,224 | 6,076,842 | 72,714,709 | |
| 2004 | 3,085,006 | 160,853 | 345,076 | 7,833,614 | 54,188,709 | 345,869 | 239,509 | 5,554,985 | 71,753,621 | |
| 2005 | 3,701,564 | 172,518 | 355,726 | 7,259,919 | 65,600,474 | 676,526 | 242,611 | 6,512,942 | 84,522,281 | |
| 2006 | 3,475,227 | 160,722 | 302,363 | 7,187,453 | 62,293,580 | 514,822 | 243,220 | 5,670,042 | 79,847,429 | |
| 2007 | 3,379,147 | 157,816 | 351,200 | 7,087,508 | 61,098,327 | 518,288 | 250,722 | 5,796,998 | 78,640,006 | |
| 2008 | 3,374,456 | 156,870 | 476,849 | 7,718,112 | 62,304,591 | 546,209 | 260,929 | 5,534,366 | 80,372,383 | |
| 2009 | 3,274,225 | 155,030 | 451,378 | 6,900,646 | 61,375,002 | 524,190 | 262,477 | 5,465,904 | 78,408,852 | |
| 2010 | 4,097,889 | 208,282 | 484,141 | 10,266,023 | 78,489,254 | 705,844 | 356,916 | 6,721,218 | 101,329,567 | |
| 2011 | 4,834,944 | 247,955 | 471,458 | 12,074,947 | 88,480,152 | 820,229 | 405,655 | 7,847,922 | 115,183,262 | |
| 2012 | 4,878,430 | 247,864 | 465,078 | 11,961,351 | 87,873,480 | 818,367 | 404,684 | 7,845,676 | 114,494,931 | |
| 2013 | 4,684,203 | 237,221 | 481,153 | 11,475,081 | 84,498,780 | 787,575 | 387,486 | 7,535,961 | 110,087,460 | |
| 2014 | 4,627,974 | 234,702 | 483,761 | 11,358,805 | 83,408,615 | 779,817 | 386,347 | 7,465,954 | 108,745,975 | |
| 2015 | 4,507,804 | 233,034 | 485,443 | 11,209,970 | 83,167,881 | 775,170 | 384,451 | 7,422,849 | 108,186,603 | |
| 2016 | 4,526,065 | 234,121 | 483,378 | 11,201,079 | 83,621,571 | 778,653 | 385,602 | 7,456,408 | 108,686,877 | |
| 2017 | 4,486,194 | 231,669 | 473,106 | 10,950,604 | 82,806,927 | 770,929 | 381,879 | 7,381,891 | 107,483,198 | |
| 2018 | 4,506,504 | 233,870 | 454,403 | 10,936,837 | 83,688,588 | 767,242 | 384,366 | 7,432,262 | 108,404,072 | |
| 2019 | 4,495,812 | 232,678 | 449,900 | 10,819,798 | 83,285,366 | 763,434 | 382,658 | 7,405,611 | 107,835,256 | |
| 2020 | 4,329,121 | 230,723 | 452,095 | 10,695,644 | 82,832,078 | 756,365 | 378,306 | 7,337,805 | 107,012,136 | |
| 2021 | 4,356,824 | 232,438 | 455,033 | 10,750,939 | 83,398,900 | 761,614 | 381,083 | 7,389,661 | 107,726,492 | |
| 2022 | 4,343,306 | 231,763 | 458,499 | 10,708,447 | 83,279,262 | 759,167 | 379,396 | 7,365,936 | 107,525,776 | |
| 2023 | 4,354,669 | 232,643 | 462,197 | 10,742,942 | 83,602,276 | 761,777 | 380,656 | 7,391,126 | 107,928,286 | |
| 2024 | 4,315,190 | 230,241 | 465,841 | 10,627,920 | 82,941,187 | 753,978 | 376,067 | 7,315,721 | 107,026,145 | |
| 2025 | 4,297,860 | 229,894 | 469,485 | 10,604,208 | 82,898,037 | 752,095 | 375,126 | 7,295,225 | 106,921,929 | |
| 2026 | 4,303,086 | 230,928 | 473,465 | 10,641,396 | 83,217,916 | 754,583 | 376,978 | 7,316,589 | 107,314,941 | |
| 2027 | 4,296,939 | 229,699 | 477,114 | 10,589,014 | 82,983,937 | 751,426 | 373,975 | 7,289,852 | 106,991,956 | |
| 2028 | 4,232,870 | 227,124 | 479,013 | 10,456,916 | 82,270,875 | 741,549 | 369,045 | 7,189,168 | 105,966,560 | |
| 2029 | 4,235,802 | 226,748 | 483,075 | 10,440,134 | 82,254,104 | 740,826 | 367,820 | 7,184,935 | 105,933,444 | |
| 2030 | 3,912,903 | 211,182 | 487,207 | 9,692,566 | 77,806,523 | 686,027 | 338,528 | 6,635,688 | 99,770,622 | |
| 2031 | 3,952,007 | 213,840 | 490,085 | 9,799,260 | 78,756,264 | 693,870 | 342,311 | 6,714,537 | 100,962,175 | |
| 2032 | 3,914,723 | 211,210 | 494,584 | 9,673,108 | 77,902,152 | 685,735 | 338,183 | 6,636,654 | 99,856,349 | |
| 2033 | 3,971,438 | 215,085 | 498,802 | 9,850,814 | 79,254,187 | 697,632 | 343,879 | 6,751,603 | 101,583,439 | |
| 2034 | 3,936,610 | 212,624 | 502,784 | 9,724,302 | 78,463,581 | 689,857 | 339,962 | 6,678,730 | 100,548,451 | |
| 2035 | 3,906,347 | 210,478 | 506,702 | 9,631,491 | 78,186,466 | 682,976 | 333,742 | 6,615,211 | 100,073,413 | |
| TOTAL | 189,702,102 | 9,733,666 | 21,805,656 | 451,611,124 | 3,685,836,021 | 26,188,866 | 15,776,832 | 337,975,087 | 4,738,629,354 | |

TABLE B-23. Total Transportation and Delta Water Charge for Each Contractor

| Calendar Year | (in dollars) | | | | | | | | | | Sheet 3 of 4 |
|----------------------|---|------------------------------------|--|---|---------------------------|---|---------------------------|-------------------------------|--|---|--------------|
| | SOUTHERN CALIFORNIA AREA | | | | | | | | | | |
| | Antelope Valley - East Kern Water Agency | Castaic Lake Water Agency | Coachella Valley Water District | Crestline - Lake Arrowhead Water Agency | Desert Water Agency | Littlerock Creek Irrigation District | Mojave Water Agency | Palmdale Water District | San Bernardino Valley Municipal Water District | San Gabriel Valley Municipal Water District | |
| | [20] | [21] | [22] | [23] | [24] | [25] | [26] | [27] | [28] | [29] | |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 1963 | 33,841 | 0 | 0 | 0 | 725 | 0 | 0 | 0 | 51,711 | 0 | |
| 1964 | 63,637 | 27,438 | 19,535 | 4,368 | 38,197 | 1,142 | 29,747 | 8,202 | 82,782 | 34,973 | |
| 1965 | 119,942 | 52,989 | 34,336 | 7,191 | 42,687 | 2,081 | 52,687 | 15,217 | 135,023 | 35,333 | |
| 1966 | 218,209 | 101,232 | 62,456 | 12,474 | 76,861 | 3,752 | 94,947 | 27,670 | 232,426 | 61,445 | |
| 1967 | 422,183 | 210,746 | 121,230 | 23,464 | 148,792 | 7,282 | 184,188 | 54,006 | 433,210 | 115,536 | |
| 1968 | 744,563 | 491,235 | 218,583 | 41,496 | 265,090 | 12,866 | 328,151 | 95,438 | 781,930 | 208,864 | |
| 1969 | 1,073,513 | 742,243 | 334,003 | 61,208 | 393,906 | 18,688 | 487,115 | 138,023 | 1,205,471 | 321,659 | |
| 1970 | 1,397,545 | 942,243 | 470,279 | 89,673 | 552,058 | 25,223 | 673,155 | 184,783 | 1,777,649 | 467,431 | |
| 1971 | 1,731,854 | 1,136,710 | 627,141 | 128,321 | 753,842 | 31,827 | 907,578 | 231,214 | 2,537,458 | 659,218 | |
| 1972 | 2,213,559 | 1,381,887 | 819,422 | 185,824 | 1,035,552 | 43,760 | 1,235,303 | 287,548 | 3,757,581 | 950,069 | |
| 1973 | 2,366,498 | 1,430,388 | 971,549 | 190,946 | 1,264,428 | 46,049 | 1,328,179 | 313,372 | 4,025,516 | 960,784 | |
| 1974 | 2,487,414 | 1,525,935 | 998,174 | 204,028 | 1,304,969 | 48,922 | 1,387,866 | 331,627 | 4,462,696 | 1,104,245 | |
| 1975 | 2,705,689 | 1,617,048 | 1,047,313 | 219,242 | 1,381,046 | 53,231 | 1,474,918 | 355,193 | 4,637,837 | 1,207,793 | |
| 1976 | 3,170,616 | 1,653,780 | 1,106,290 | 232,081 | 1,474,159 | 57,721 | 1,551,743 | 381,199 | 4,837,349 | 1,278,480 | |
| 1977 | 3,152,694 | 1,741,709 | 1,008,439 | 245,063 | 1,316,814 | 54,199 | 1,639,562 | 406,543 | 5,093,211 | 1,336,049 | |
| 1978 | 3,600,850 | 1,874,851 | 1,208,681 | 255,418 | 1,617,786 | 56,795 | 1,687,111 | 419,949 | 5,090,895 | 1,373,766 | |
| 1979 | 4,274,511 | 1,954,729 | 1,295,634 | 267,741 | 1,740,357 | 60,273 | 1,862,899 | 449,679 | 5,135,792 | 1,341,866 | |
| 1980 | 4,958,869 | 2,093,178 | 1,406,539 | 295,300 | 1,941,103 | 67,594 | 2,035,374 | 498,972 | 5,646,551 | 1,484,871 | |
| 1981 | 5,786,839 | 2,562,602 | 1,573,963 | 328,765 | 2,193,793 | 100,740 | 2,356,780 | 603,182 | 6,460,754 | 1,688,045 | |
| 1982 | 5,545,598 | 2,725,727 | 1,657,379 | 346,669 | 2,336,614 | 82,284 | 2,330,440 | 641,909 | 6,751,715 | 1,929,385 | |
| 1983 | 6,296,033 | 2,796,406 | 2,181,528 | 380,786 | 3,172,018 | 88,372 | 2,527,160 | 658,528 | 6,963,597 | 1,808,463 | |
| 1984 | 7,671,460 | 3,875,190 | 3,287,022 | 497,530 | 4,929,444 | 96,480 | 2,793,879 | 727,732 | 8,052,068 | 2,597,938 | |
| 1985 | 9,502,441 | 4,341,343 | 4,122,569 | 601,871 | 6,264,838 | 103,693 | 2,984,373 | 959,565 | 8,892,175 | 2,686,498 | |
| 1986 | 9,470,683 | 4,976,857 | 4,583,914 | 647,576 | 7,009,362 | 130,208 | 3,168,204 | 1,223,753 | 9,141,638 | 3,398,233 | |
| 1987 | 9,504,912 | 4,834,428 | 4,452,560 | 678,027 | 6,885,597 | 240,859 | 3,222,939 | 1,254,957 | 10,543,136 | 3,398,610 | |
| 1988 | 9,103,618 | 5,021,257 | 4,510,079 | 704,352 | 7,052,287 | 158,832 | 3,397,291 | 1,044,110 | 11,093,980 | 3,270,823 | |
| 1989 | 10,994,078 | 5,030,642 | 4,217,921 | 691,132 | 6,635,042 | 210,621 | 3,478,280 | 1,746,666 | 10,810,769 | 3,453,364 | |
| 1990 | 12,385,968 | 5,498,725 | 4,916,094 | 729,168 | 7,720,532 | 331,158 | 3,710,833 | 1,953,805 | 11,721,704 | 4,220,945 | |
| 1991 | 9,246,486 | 4,612,483 | 3,471,487 | 688,804 | 5,334,646 | 221,152 | 4,570,834 | 1,639,984 | 11,103,608 | 3,642,283 | |
| 1992 | 11,803,420 | 5,801,165 | 3,625,799 | 612,831 | 5,587,010 | 174,984 | 5,549,285 | 1,532,224 | 11,142,805 | 3,693,763 | |
| 1993 | 12,217,035 | 5,447,823 | 3,830,583 | 617,132 | 5,922,097 | 211,890 | 5,440,610 | 1,753,869 | 12,105,846 | 4,041,979 | |
| 1994 | 14,286,062 | 6,014,278 | 3,857,597 | 694,352 | 5,963,211 | 277,998 | 6,392,054 | 2,090,620 | 12,730,316 | 4,776,392 | |
| 1995 | 14,152,450 | 6,389,923 | 4,680,239 | 661,742 | 7,318,186 | 212,229 | 5,584,847 | 1,952,389 | 12,203,021 | 4,480,563 | |
| 1996 | 14,578,978 | 6,621,060 | 7,633,988 | 710,580 | 12,187,087 | 208,342 | 5,682,987 | 2,300,101 | 12,729,478 | 4,598,694 | |
| 1997 | 15,148,717 | 6,514,712 | 7,250,920 | 750,347 | 8,515,397 | 207,872 | 6,105,527 | 2,342,092 | 14,398,643 | 4,897,093 | |
| 1998 | 13,664,407 | 6,137,514 | 6,324,356 | 717,067 | 7,017,829 | 209,042 | 7,708,276 | 1,946,338 | 14,307,575 | 4,176,768 | |
| 1999 | 15,464,538 | 6,707,045 | 5,363,950 | 823,063 | 7,183,897 | 214,741 | 8,334,222 | 2,362,165 | 15,723,180 | 5,113,278 | |
| 2000 | 14,743,141 | 10,234,965 | 3,821,368 | 769,402 | 5,586,644 | 186,888 | 8,260,951 | 2,073,811 | 15,525,166 | 4,248,946 | |
| 2001 | 24,909,789 | 15,913,873 | 5,087,987 | 997,744 | 7,634,219 | 199,189 | 8,960,849 | 4,004,522 | 21,529,657 | 4,401,017 | |
| 2002 | 16,369,453 | 13,371,574 | 4,300,082 | 962,455 | 6,410,842 | 182,556 | 8,139,694 | 3,397,075 | 22,491,648 | 5,811,633 | |
| 2003 | 17,741,765 | 14,248,107 | 4,411,500 | 935,415 | 6,620,389 | 188,349 | 9,822,426 | 2,934,663 | 20,968,682 | 5,994,003 | |
| 2004 | 18,567,464 | 15,630,715 | 5,083,480 | 1,033,599 | 6,649,130 | 196,725 | 9,918,333 | 3,167,962 | 25,269,215 | 5,426,406 | |
| 2005 | 19,015,317 | 14,322,089 | 18,589,904 | 857,064 | 11,568,191 | 187,155 | 9,773,550 | 3,225,261 | 23,281,657 | 5,679,597 | |
| 2006 | 20,673,505 | 13,740,173 | 31,732,876 | 846,784 | 11,685,653 | 197,788 | 12,559,110 | 3,177,908 | 23,169,181 | 5,758,915 | |
| 2007 | 23,880,840 | 16,963,518 | 30,287,937 | 1,082,588 | 11,044,007 | 198,369 | 16,229,205 | 4,682,178 | 29,525,907 | 4,805,241 | |
| 2008 | 22,043,750 | 19,305,280 | 30,278,801 | 1,116,175 | 12,227,562 | 218,584 | 14,896,464 | 4,815,444 | 30,133,625 | 5,964,125 | |
| 2009 | 19,841,328 | 16,996,422 | 27,814,854 | 1,083,940 | 10,043,733 | 221,056 | 14,573,283 | 4,464,003 | 29,376,329 | 6,440,891 | |
| 2010 | 36,116,516 | 22,324,610 | 40,175,602 | 2,145,204 | 14,931,131 | 452,078 | 18,683,259 | 5,525,399 | 38,712,447 | 8,160,900 | |
| 2011 | 29,353,043 | 19,887,648 | 41,078,018 | 1,880,915 | 14,902,698 | 718,306 | 30,771,211 | 6,663,257 | 46,416,187 | 8,719,424 | |
| 2012 | 28,060,715 | 19,461,364 | 46,597,319 | 1,759,658 | 16,568,544 | 672,031 | 27,455,934 | 6,076,229 | 44,687,981 | 8,860,243 | |
| 2013 | 26,804,901 | 18,662,710 | 44,745,554 | 1,703,152 | 15,302,819 | 619,715 | 26,054,403 | 5,614,880 | 42,096,499 | 8,110,812 | |
| 2014 | 26,367,749 | 18,575,323 | 42,282,638 | 1,667,361 | 14,194,975 | 591,353 | 25,092,483 | 5,351,384 | 40,439,760 | 9,509,674 | |
| 2015 | 34,600,928 | 24,926,374 | 49,818,627 | 1,948,996 | 17,172,404 | 574,680 | 25,306,860 | 5,195,288 | 39,788,180 | 9,319,932 | |
| 2016 | 35,114,119 | 25,286,495 | 50,500,554 | 1,973,644 | 17,407,683 | 583,041 | 25,738,803 | 5,273,618 | 40,202,261 | 9,436,046 | |
| 2017 | 33,735,845 | 24,653,761 | 49,169,033 | 1,911,434 | 16,846,095 | 560,453 | 24,841,195 | 5,068,498 | 39,155,271 | 9,139,177 | |
| 2018 | 34,848,585 | 24,804,553 | 50,193,572 | 1,955,522 | 17,256,313 | 578,106 | 25,628,820 | 5,239,475 | 39,821,159 | 9,328,758 | |
| 2019 | 33,775,687 | 24,172,589 | 49,060,515 | 1,904,778 | 16,809,345 | 560,380 | 24,878,175 | 5,077,032 | 38,981,413 | 9,090,728 | |
| 2020 | 33,625,831 | 23,963,627 | 48,632,774 | 1,884,804 | 16,643,214 | 556,615 | 25,571,519 | 5,050,326 | 38,494,198 | 8,965,620 | |
| 2021 | 33,548,880 | 23,883,083 | 48,276,055 | 1,859,812 | 16,512,351 | 554,309 | 25,452,853 | 5,034,891 | 38,057,002 | 8,857,805 | |
| 2022 | 33,456,621 | 23,714,180 | 47,517,731 | 1,846,515 | 16,359,132 | 552,567 | 25,355,943 | 5,020,999 | 37,761,915 | 8,785,122 | |
| 2023 | 33,547,512 | 23,797,112 | 46,935,121 | 1,849,268 | 16,280,334 | 553,955 | 25,441,769 | 5,034,422 | 37,737,288 | 8,775,299 | |
| 2024 | 33,185,617 | 23,453,242 | 46,508,006 | 1,830,298 | 16,120,261 | 548,060 | 25,148,139 | 4,980,405 | 37,423,749 | 8,686,958 | |
| 2025 | 33,118,132 | 23,369,045 | 46,434,692 | 1,825,443 | 16,093,913 | 546,865 | 25,131,149 | 4,971,530 | 37,349,622 | 8,664,271 | |
| 2026 | 32,951,401 | 23,199,553 | 46,150,054 | 1,814,877 | 15,984,596 | 544,065 | 24,966,238 | 4,947,579 | 37,119,673 | 8,597,228 | |
| 2027 | 33,185,880 | 23,419,497 | 46,444,994 | 1,829,028 | 16,107,769 | 548,069 | 25,180,307 | 4,981,756 | 37,421,845 | 8,673,703 | |
| 2028 | 32,749,743 | 22,961,052 | 45,946,467 | 1,805,292 | 15,900,659 | 540,693 | 24,838,918 | 4,919,151 | 36,957,764 | 8,544,482 | |
| 2029 | 32,879,114 | 23,079,179 | 46,177,792 | 1,814,370 | 15,990,476 | 542,953 | 24,966,025 | 4,937,931 | 37,194,329 | 8,602,907 | |
| 2030 | 31,399,400 | 21,358,487 | 44,397,105 | 1,725,452 | 15,257,821 | 517,747 | 23,804,548 | 4,726,135 | 35,468,786 | 8,137,148 | |
| 2031 | 32,224,258 | 21,666,499 | 45,314,774 | 1,764,411 | 15,624,360 | 531,166 | 24,414,830 | 4,850,821 | 36,177,831 | 8,330,831 | |
| 2032 | 31,069,546 | 21,074,798 | 44,218,461 | 1,715,080 | 15,176,335 | 512,453 | 23,580,996 | 4,677,239 | 35,392,584 | 8,103,898 | |
| 2033 | 32,290,935 | 21,701,754 | 45,473,706 | 1,772,916 | 15,673,768 | 532,377 | 24,531,272 | 4,862,732 | 36,341,786 | 8,364,145 | |
| 2034 | 31,111,833 | 21,158,257 | 44,407,206 | 1,720,090 | 15,236,310 | 513,251 | 23,701,729 | 4,687,250 | 35,556,604 | 8,137,709 | |
| 2035 | 32,500,043 | 21,730,750 | 45,820,411 | 1,786,175 | 15,798,176 | 535,801 | | | | | |

| Calendar Year | (in dollars) | | | | | | | | South Bay Area Future Contractor | GRAND TOTAL |
|----------------------|--|--|---|-------------|-----------------------------|---------------------------|----------------------------|---------|---|--------------------|
| | SOUTHERN CALIFORNIA AREA (continued) | | | | FEATHER RIVER AREA | | | | | |
| | San Gorgonio Pass Water Agency | The Metropolitan Water District of Southern California | Ventura County Flood Control District | Total | City of Yuba City | County of Butte | Plumas County FC&WCD | Total | | |
| | [30] | [31] | [32] | [33] | [34] | [35] | [36] | [37] | [38] | [39] |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3,219 | 79,888 |
| 1963 | 0 | 690,539 | 0 | 776,816 | 0 | 0 | 0 | 0 | 12,626 | 1,626,945 |
| 1964 | 21,728 | 1,260,042 | 9,374 | 1,601,166 | 0 | 0 | 0 | 0 | 13,938 | 2,807,966 |
| 1965 | 21,859 | 2,179,810 | 17,760 | 2,716,916 | 0 | 0 | 405 | 405 | 28,937 | 4,811,350 |
| 1966 | 37,952 | 3,898,819 | 33,415 | 4,861,658 | 0 | 0 | 564 | 564 | 31,321 | 7,402,353 |
| 1967 | 71,260 | 7,691,085 | 68,133 | 9,551,114 | 0 | 0 | 562 | 562 | 47,718 | 13,073,586 |
| 1968 | 128,877 | 15,313,065 | 142,760 | 18,772,919 | 0 | 1,050 | 1,439 | 2,489 | 46,945 | 25,589,287 |
| 1969 | 198,704 | 23,145,744 | 215,144 | 28,335,421 | 0 | 1,225 | 4,119 | 5,344 | 52,963 | 36,982,277 |
| 1970 | 289,546 | 30,607,434 | 273,523 | 37,750,542 | 0 | 3,848 | 17,111 | 20,959 | 69,744 | 48,501,294 |
| 1971 | 409,205 | 39,946,463 | 342,325 | 49,443,158 | 0 | 4,546 | 19,182 | 23,728 | 55,532 | 61,715,229 |
| 1972 | 537,044 | 54,976,817 | 422,192 | 67,846,559 | 0 | 4,929 | 21,145 | 26,074 | 80,412 | 83,973,102 |
| 1973 | 587,814 | 59,575,172 | 435,541 | 73,496,235 | 0 | 7,059 | 21,772 | 28,831 | 54,219 | 88,906,571 |
| 1974 | 611,275 | 65,991,774 | 455,447 | 80,914,371 | 0 | 8,336 | 22,403 | 30,739 | 76,783 | 97,857,824 |
| 1975 | 644,464 | 71,813,105 | 478,284 | 87,635,162 | 0 | 9,416 | 23,517 | 32,933 | 84,547 | 106,769,009 |
| 1976 | 668,153 | 74,889,946 | 475,466 | 91,776,982 | 0 | 7,004 | 23,251 | 30,255 | 106,717 | 112,696,952 |
| 1977 | 696,350 | 73,320,946 | 506,941 | 90,518,520 | 0 | 16,917 | 24,054 | 40,971 | 98,618 | 111,305,987 |
| 1978 | 708,874 | 81,933,455 | 523,053 | 100,351,483 | 0 | 12,635 | 24,219 | 36,854 | 100,786 | 124,349,273 |
| 1979 | 712,699 | 83,583,809 | 526,278 | 103,206,267 | 0 | 16,575 | 28,346 | 44,921 | 119,352 | 130,368,885 |
| 1980 | 862,108 | 93,010,922 | 583,496 | 114,884,874 | 0 | 19,834 | 26,556 | 46,390 | 178,812 | 144,787,527 |
| 1981 | 946,788 | 112,152,065 | 672,397 | 137,426,715 | 0 | 21,682 | 34,558 | 56,240 | 185,347 | 175,353,217 |
| 1982 | 1,021,156 | 117,123,623 | 727,476 | 143,219,975 | 0 | 16,117 | 43,111 | 59,228 | 173,894 | 184,418,204 |
| 1983 | 1,076,102 | 118,970,809 | 854,111 | 147,773,914 | 0 | 15,202 | 29,405 | 44,607 | 220,926 | 186,072,055 |
| 1984 | 1,211,437 | 156,252,901 | 933,156 | 192,926,238 | 20,590 | 15,442 | 31,790 | 67,822 | 225,959 | 245,516,348 |
| 1985 | 1,947,602 | 194,946,283 | 993,495 | 237,686,746 | 24,050 | 16,976 | 32,399 | 73,425 | 304,322 | 301,414,637 |
| 1986 | 1,344,580 | 218,310,580 | 1,058,119 | 264,463,708 | 31,753 | 18,145 | 33,591 | 83,489 | 279,227 | 334,359,285 |
| 1987 | 1,379,421 | 204,838,227 | 1,056,160 | 252,289,834 | 37,071 | 17,794 | 33,378 | 88,243 | 345,116 | 324,443,114 |
| 1988 | 1,465,634 | 221,645,738 | 1,123,943 | 269,591,943 | 48,058 | 19,117 | 33,600 | 100,775 | 365,207 | 346,233,883 |
| 1989 | 1,505,285 | 230,306,788 | 1,232,220 | 280,312,808 | 61,184 | 20,809 | 37,183 | 119,176 | 422,329 | 361,130,538 |
| 1990 | 1,624,564 | 277,172,964 | 1,855,829 | 333,842,289 | 66,041 | 20 | | | | |

TABLE B-24. Equivalent Unit Charge for Water Supply for Each Contractor^a

| Project Service Area and Water Supply Contractor | (in dollars per acre-foot) Transportation Charge | | | | | Delta Water Charge | Water System Revenue Bond Surcharge | Total Equivalent Unit Charge |
|---|---|-------------------------------|-------------------------------|--------------------------------|----------|--------------------------|--|---------------------------------------|
| | Capital Cost Component | Minimum OMP&R Component | Off- Aqueduct Component | Variable OMP&R Component | Total | | | |
| | [1] | [2] | [3] | [4] | [5] | | | |
| FEATHER RIVER AREA | | | | | | | | |
| City of Yuba City | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 72.73 | 8.47 | 81.20 |
| County of Butte | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 62.12 | 1.20 | 63.32 |
| Plumas County Flood Control and Water Conservation District | 28.44 | 3.31 | 0.00 | 0.00 | 31.75 | 55.65 | 5.19 | 92.60 |
| Feather River Area | 3.46 | 0.40 | 0.00 | 0.00 | 3.86 | 64.54 | 3.88 | 72.29 |
| NORTH BAY AREA | | | | | | | | |
| Napa County Flood Control and Water Conservation District | 147.54 | 53.53 | 4.39 | 17.96 | 223.42 | 28.72 | 11.61 | 263.74 |
| Solano County Water Agency | 90.91 | 46.02 | 4.60 | 9.51 | 151.04 | 35.43 | 11.01 | 197.48 |
| North Bay Area | 112.49 | 48.88 | 4.52 | 12.73 | 178.62 | 32.87 | 11.24 | 222.73 |
| SOUTH BAY AREA | | | | | | | | |
| Alameda County Flood Control and Water Conservation District, Zone 7 | 41.64 | 45.20 | 8.30 | 20.07 | 115.21 | 33.53 | 7.72 | 156.46 |
| Alameda County Water District | 26.99 | 29.13 | 7.04 | 13.09 | 76.25 | 25.94 | 4.52 | 106.71 |
| Santa Clara Valley Water District | 23.52 | 20.94 | 6.53 | 11.70 | 62.69 | 18.04 | 3.23 | 83.96 |
| South Bay Area | 27.36 | 26.67 | 6.94 | 13.44 | 74.39 | 22.14 | 4.25 | 100.79 |
| SAN JOAQUIN VALLEY AREA | | | | | | | | |
| County of Kings | 5.38 | 7.24 | 3.40 | 7.99 | 24.01 | 26.52 | 3.58 | 54.11 |
| Dudley Ridge Water District | 5.22 | 5.43 | 3.26 | 4.88 | 18.78 | 19.30 | 2.16 | 40.24 |
| Empire West Side Irrigation District | 2.07 | 4.87 | 2.40 | 4.59 | 13.93 | 19.98 | 1.72 | 35.62 |
| Kern County Water Agency | 9.56 | 10.64 | 4.96 | 7.07 | 32.24 | 22.19 | 2.38 | 56.82 |
| Oak Flat Water District | 2.06 | 2.57 | 1.95 | 3.12 | 9.71 | 18.45 | 1.71 | 29.86 |
| Tulare Lake Basin Water Storage District | 5.34 | 5.46 | 3.12 | 4.85 | 18.78 | 18.77 | 2.10 | 39.64 |
| San Joaquin Valley Area | 8.82 | 9.75 | 4.65 | 4.87 | 28.10 | 19.04 | 2.13 | 49.27 |
| CENTRAL COASTAL AREA | | | | | | | | |
| San Luis Obispo County Flood Control and Water Conservation District | 242.60 | 150.83 | 9.37 | 95.46 | 498.27 | 101.34 | 29.59 | 629.20 |
| Santa Barbara County Flood Control and Water Conservation District | 817.26 | 192.21 | 18.01 | 87.77 | 1,115.25 | 63.69 | 57.01 | 1,235.95 |
| Central Coastal Area | 671.37 | 181.70 | 15.82 | 89.72 | 958.62 | 73.25 | 50.05 | 1,081.91 |
| SOUTHERN CALIFORNIA AREA | | | | | | | | |
| Antelope Valley-East Kern Water Agency | 49.46 | 48.43 | 29.82 | 67.29 | 195.00 | 41.55 | 8.32 | 244.86 |
| Castaic Lake Water Agency | 55.45 | 53.92 | 23.42 | 42.91 | 175.71 | 36.92 | 13.37 | 226.01 |
| Coachella Valley Water District | 79.83 | 73.83 | 37.62 | 71.36 | 262.64 | 34.10 | 10.83 | 307.57 |
| Crestline-Lake Arrowhead Water Agency | 125.26 | 117.74 | 32.01 | 84.20 | 359.21 | 55.41 | 15.90 | 430.52 |
| Desert Water Agency | 50.49 | 49.56 | 48.99 | 44.34 | 193.38 | 25.69 | 6.82 | 225.89 |
| Littlerock Creek Irrigation District | 69.48 | 67.40 | 27.54 | 74.12 | 238.53 | 56.60 | 11.29 | 306.42 |
| Mojave Water Agency | 100.25 | 114.15 | 24.25 | 131.61 | 370.26 | 66.99 | 19.64 | 456.89 |
| Palmdale Water District | 54.50 | 56.18 | 38.32 | 90.41 | 239.41 | 51.16 | 9.42 | 299.98 |
| San Bernardino Valley Municipal Water District | 194.71 | 160.71 | 27.02 | 76.18 | 458.62 | 64.64 | 19.71 | 542.97 |
| San Gabriel Valley Municipal Water District | 108.51 | 102.65 | 42.77 | 49.42 | 303.35 | 46.02 | 13.42 | 362.79 |
| San Geronio Pass Water Agency | 741.15 | 376.74 | 27.53 | 189.19 | 1,334.62 | 88.24 | 17.15 | 1,440.01 |
| The Metropolitan Water District of Southern California | 83.13 | 67.02 | 36.01 | 45.67 | 231.83 | 38.54 | 10.31 | 280.68 |
| Ventura County Watershed Protection District | 165.87 | 136.94 | 20.40 | 100.17 | 423.37 | 83.66 | 23.19 | 530.21 |
| Southern California Area | 77.82 | 64.33 | 32.54 | 46.49 | 221.19 | 37.90 | 9.97 | 269.05 |
| ALL AREAS | 50.89 | 40.75 | 19.32 | 28.33 | 139.29 | 30.73 | 6.81 | 176.82 |

(a) Hypothetical charges, which, if assessed on all Table A water delivered to date, all surplus water delivered prior to May 1, 1973, and all Table A water estimated to be delivered during the remainder of the project repayment period (Table B-5B), would provide a sum at the end of the period financially equivalent to all Transportation Charge and Delta Water Charge payments required under a water supply contract, considering interest at the Project Interest Rate, 4.608 percent per annum.

**TABLE B-25. Equivalent Unit Transportation Costs of
Water Delivered from or through Each Aqueduct Reach^a**

(in dollars per acre-foot)

| Aqueduct Reach | Unit Costs of Reach (b) | | | | | | Cumulative Unit Costs from the Delta | | | | | |
|----------------|-------------------------|---|---------------|--------------------|----------------|--------|--------------------------------------|---|---------------|--------------------|----------------|----------|
| | Capital Costs | Water System Revenue Bond Surcharge (c) | Minimum OMP&R | Off-Aqueduct Costs | Variable OMP&R | Total | Capital Costs | Water System Revenue Bond Surcharge (c) | Minimum OMP&R | Off-Aqueduct Costs | Variable OMP&R | Total |
| | [1] | [2] | [3] | [4] | [5] | [6] | [7] | [8] | [9] | [10] | [11] | [12] |
| NBA | | | | | | | | | | | | |
| 1 | 38.05 | 12.55 | 13.47 | 2.08 | 1.37 | 67.52 | 38.05 | 12.55 | 13.47 | 2.08 | 1.37 | 67.52 |
| 2 | 40.49 | 13.36 | 5.88 | 0.00 | 0.00 | 59.73 | 78.54 | 25.91 | 19.35 | 2.08 | 1.37 | 127.25 |
| 3A | 7.22 | 2.38 | 11.70 | 4.99 | 2.22 | 28.51 | 85.76 | 28.29 | 31.05 | 7.07 | 3.59 | 155.76 |
| 3B | 46.43 | 15.32 | 26.46 | 3.30 | 4.93 | 96.44 | 124.97 | 41.23 | 45.81 | 5.38 | 6.30 | 223.69 |
| SBA | | | | | | | | | | | | |
| 1 | 6.65 | 2.19 | 15.78 | 5.37 | 5.14 | 35.13 | 8.51 | 2.80 | 18.89 | 7.86 | 7.54 | 45.60 |
| 2 | 0.63 | 0.21 | 1.78 | 0.00 | 0.00 | 2.62 | 9.14 | 3.01 | 20.67 | 7.86 | 7.54 | 48.22 |
| 4 | 2.09 | 0.69 | 3.04 | 0.00 | 0.00 | 5.82 | 11.23 | 3.70 | 23.71 | 7.86 | 7.54 | 54.04 |
| 5 | 4.39 | 1.45 | 2.38 | 0.00 | 0.00 | 8.22 | 15.62 | 5.15 | 26.09 | 7.86 | 7.54 | 62.26 |
| 6 | 0.25 | 0.08 | 0.25 | 0.00 | 0.00 | 0.58 | 15.87 | 5.23 | 26.34 | 7.86 | 7.54 | 62.84 |
| 7 | 1.95 | 0.64 | 0.46 | 0.00 | 0.00 | 3.05 | 17.82 | 5.87 | 26.80 | 7.86 | 7.54 | 65.89 |
| 8 | 2.64 | 0.87 | 0.77 | 0.00 | 0.00 | 4.28 | 20.46 | 6.74 | 27.57 | 7.86 | 7.54 | 70.17 |
| 9 | 5.46 | 1.80 | 2.87 | 0.00 | 0.00 | 10.13 | 25.92 | 8.54 | 30.44 | 7.86 | 7.54 | 80.30 |
| CA | | | | | | | | | | | | |
| 1 | 1.86 | 0.61 | 3.11 | 2.49 | 2.40 | 10.47 | 1.86 | 0.61 | 3.11 | 2.49 | 2.40 | 10.47 |
| 2A | 1.18 | 0.39 | 0.61 | 0.00 | 0.00 | 2.18 | 3.04 | 1.00 | 3.72 | 2.49 | 2.40 | 12.65 |
| 2B | 0.61 | 0.20 | 0.31 | 0.00 | 0.00 | 1.12 | 3.65 | 1.20 | 4.03 | 2.49 | 2.40 | 13.77 |
| 3 | 0.53 | 0.17 | 0.23 | 0.00 | 0.00 | 0.93 | 4.18 | 1.37 | 4.26 | 2.49 | 2.40 | 14.70 |
| 4 | 0.84 | 0.28 | 1.54 | 1.18 | 1.09 | 4.93 | 5.02 | 1.65 | 5.80 | 3.67 | 3.49 | 19.63 |
| 5 | 0.65 | 0.21 | 0.31 | 0.00 | 0.00 | 1.17 | 5.67 | 1.86 | 6.11 | 3.67 | 3.49 | 20.80 |
| 6 | 0.17 | 0.06 | 0.15 | 0.00 | 0.00 | 0.38 | 5.84 | 1.92 | 6.26 | 3.67 | 3.49 | 21.18 |
| 7 | 0.97 | 0.32 | 0.37 | 0.00 | 0.00 | 1.66 | 6.81 | 2.24 | 6.63 | 3.67 | 3.49 | 22.84 |
| 8C | 0.02 | 0.01 | 0.07 | 0.00 | 0.00 | 0.10 | 6.83 | 2.25 | 6.70 | 3.67 | 3.49 | 22.94 |
| 8D | 0.37 | 0.12 | 0.30 | 0.00 | 0.00 | 0.79 | 7.20 | 2.37 | 7.00 | 3.67 | 3.49 | 23.73 |
| 9 | 0.31 | 0.10 | 0.27 | 0.00 | 0.00 | 0.68 | 7.51 | 2.47 | 7.27 | 3.67 | 3.49 | 24.41 |
| 10A | 0.33 | 0.11 | 0.36 | 0.00 | 0.00 | 0.80 | 7.84 | 2.58 | 7.63 | 3.67 | 3.49 | 25.21 |
| 11B | 0.49 | 0.16 | 0.23 | 0.00 | 0.00 | 0.88 | 8.33 | 2.74 | 7.86 | 3.67 | 3.49 | 26.09 |
| 12D | 0.46 | 0.15 | 0.21 | 0.00 | 0.00 | 0.82 | 8.79 | 2.89 | 8.07 | 3.67 | 3.49 | 26.91 |
| 12E | 0.32 | 0.11 | 0.35 | 0.00 | 0.00 | 0.78 | 9.11 | 3.00 | 8.42 | 3.67 | 3.49 | 27.69 |
| 13B | 0.69 | 0.23 | 0.40 | 0.00 | 0.00 | 1.32 | 9.80 | 3.23 | 8.82 | 3.67 | 3.49 | 29.01 |
| 14A | 2.68 | 0.88 | 3.12 | 2.04 | 2.05 | 10.77 | 12.48 | 4.11 | 11.94 | 5.71 | 5.54 | 39.78 |
| 14B | 0.42 | 0.14 | 0.38 | 0.00 | 0.00 | 0.94 | 12.90 | 4.25 | 12.32 | 5.71 | 5.54 | 40.72 |
| 14C | 0.35 | 0.12 | 0.28 | 0.00 | 0.00 | 0.75 | 13.25 | 4.37 | 12.60 | 5.71 | 5.54 | 41.47 |
| 15A | 1.99 | 0.66 | 3.25 | 2.47 | 2.22 | 10.59 | 15.24 | 5.03 | 15.85 | 8.18 | 7.76 | 52.06 |
| 16A | 3.29 | 1.09 | 5.03 | 5.34 | 5.19 | 19.94 | 18.53 | 6.12 | 20.88 | 13.52 | 12.95 | 72.00 |
| 17E | 11.09 | 3.66 | 14.13 | 18.67 | 19.15 | 66.70 | 29.62 | 9.78 | 35.01 | 32.19 | 32.10 | 138.70 |
| 17F | 2.87 | 0.95 | 0.18 | 0.00 | 0.00 | 4.00 | 32.49 | 10.73 | 35.19 | 32.19 | 32.10 | 142.70 |
| 18A | 2.58 | 0.85 | 1.70 | 0.00 | -2.01 | 3.12 | 35.07 | 11.58 | 36.89 | 32.19 | 30.09 | 145.82 |
| 19 | 1.91 | 0.63 | 1.03 | 0.00 | 0.00 | 3.57 | 36.98 | 12.21 | 37.92 | 32.19 | 30.09 | 149.39 |
| 19C | 2.07 | 0.68 | 0.00 | 0.00 | 0.00 | 2.75 | 39.05 | 12.89 | 37.92 | 32.19 | 30.09 | 152.14 |
| 20A | 1.52 | 0.50 | 1.70 | 0.00 | 0.00 | 3.72 | 40.57 | 13.39 | 39.62 | 32.19 | 30.09 | 155.86 |
| 20B | 1.84 | 0.61 | 1.12 | 0.00 | 0.00 | 3.57 | 42.41 | 14.00 | 40.74 | 0.00 | 30.09 | 127.24 |
| 21 | 0.93 | 0.31 | 0.78 | 0.00 | 0.00 | 2.02 | 43.34 | 14.31 | 41.52 | 0.00 | 30.09 | 129.26 |
| 22A | 0.97 | 0.32 | 0.40 | 0.00 | 0.00 | 1.69 | 44.31 | 14.63 | 41.92 | 0.00 | 30.09 | 130.95 |
| 22B | 9.50 | 3.13 | 10.94 | 5.69 | 6.31 | 35.57 | 53.81 | 17.76 | 52.86 | 5.69 | 36.40 | 166.52 |
| 23 | 2.61 | 0.86 | 0.75 | 0.00 | -2.57 | 1.65 | 56.42 | 18.62 | 53.61 | 5.69 | 33.83 | 168.17 |
| 24 | 5.07 | 1.67 | 2.12 | 0.00 | 0.00 | 8.86 | 61.49 | 20.29 | 55.73 | 5.69 | 33.83 | 177.03 |
| 25 | 3.70 | 1.22 | 0.12 | 0.00 | 0.00 | 5.04 | 65.19 | 21.51 | 55.85 | 5.69 | 33.83 | 182.07 |
| 26A | 4.04 | 1.33 | 7.09 | 0.00 | -17.51 | (5.05) | 69.23 | 22.84 | 62.94 | 5.69 | 16.32 | 177.02 |
| 28G | 7.52 | 2.48 | 2.68 | 0.00 | 0.00 | 12.68 | 76.75 | 25.32 | 65.62 | 5.69 | 16.32 | 189.70 |
| 28H | 7.24 | 2.39 | 2.81 | 0.00 | 0.00 | 12.44 | 83.99 | 27.71 | 68.43 | 5.69 | 16.32 | 202.14 |
| 28J | 81.17 | 26.78 | 39.08 | 0.00 | 0.00 | 147.03 | 165.16 | 54.49 | 107.51 | 5.69 | 16.32 | 349.17 |
| EBX | | | | | | | | | | | | |
| 1 | N/A | 0.00 | 0.69 | 0.00 | 0.00 | 0.69 | N/A | 22.84 | 63.63 | 5.69 | 16.32 | 108.48 |
| 2A | N/A | 0.00 | 3.01 | 0.00 | 0.00 | 3.01 | N/A | 22.84 | 66.64 | 5.69 | 16.32 | 111.49 |
| 2B | N/A | 0.00 | 72.81 | 4.68 | 28.80 | 106.29 | N/A | 22.84 | 139.45 | 10.37 | 45.12 | 217.78 |
| 2C | N/A | 0.00 | 0.56 | 0.00 | 0.00 | 0.56 | N/A | 22.84 | 140.01 | 10.37 | 45.12 | 218.34 |
| 2D | N/A | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N/A | 22.84 | 140.01 | 10.37 | 45.12 | 218.34 |
| 2E | N/A | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N/A | 22.84 | 140.01 | 10.37 | 45.12 | 218.34 |
| 3A | N/A | 0.00 | 73.64 | 5.48 | 36.79 | 115.91 | N/A | 22.84 | 213.64 | 15.85 | 81.91 | 334.25 |
| 3B | N/A | 0.00 | 5.83 | 0.00 | 0.00 | 5.83 | N/A | 22.84 | 219.48 | 15.85 | 81.91 | 340.08 |
| 4A | N/A | 0.00 | 8.56 | 0.00 | 0.00 | 8.56 | N/A | 22.84 | 228.04 | 15.85 | 81.91 | 348.64 |
| 4B | N/A | 0.00 | 719.72 | 3.25 | 11.44 | 734.41 | N/A | 22.84 | 947.76 | 19.10 | 93.35 | 1,083.05 |
| WB | | | | | | | | | | | | |
| 29A | 3.76 | 1.24 | 8.12 | 2.43 | 2.25 | 17.80 | 36.25 | 11.97 | 43.31 | 34.62 | 34.35 | 160.50 |
| 29F | 2.75 | 0.91 | 0.97 | 0.00 | 0.00 | 4.63 | 39.00 | 12.88 | 44.28 | 34.62 | 34.35 | 165.13 |
| 29G | 9.12 | 3.01 | 4.62 | 0.00 | -8.09 | 8.66 | 48.12 | 15.89 | 48.90 | 34.62 | 26.26 | 173.79 |
| 29H | 5.68 | 1.87 | 4.38 | 0.00 | 0.00 | 11.93 | 53.80 | 17.76 | 53.28 | 34.62 | 26.26 | 185.72 |
| 29J | 9.52 | 3.14 | 1.26 | 0.00 | -15.14 | (1.22) | 63.32 | 20.90 | 54.54 | 34.62 | 11.12 | 184.50 |
| 30 | 15.28 | 5.04 | 3.93 | 0.00 | 0.00 | 24.25 | 78.60 | 25.94 | 58.47 | 34.62 | 11.12 | 208.75 |
| CB | | | | | | | | | | | | |
| 31A | 6.91 | 2.28 | 18.53 | 1.98 | 1.93 | 31.63 | 14.11 | 4.65 | 25.53 | 5.65 | 5.42 | 55.36 |
| 33A | 258.33 | 85.22 | 34.95 | 11.62 | 25.29 | 415.41 | 272.44 | 89.87 | 60.48 | 17.27 | 30.71 | 470.77 |
| 34 | 184.57 | 60.89 | 0.97 | 0.00 | 0.00 | 246.43 | 457.01 | 150.76 | 61.45 | 17.27 | 30.71 | 717.20 |
| 35 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 457.01 | 150.76 | 61.45 | 17.27 | 30.71 | 717.20 |

(a) Representative of transportation unit costs only; does not include a unit cost of conservation. The Delta Water Rate should be added to these values in order to approximate unit costs at canalside.

Includes surplus water prior to May 1, 1973.

(b) Hypothetical charges which, if assessed on all Table A water delivered to date, all surplus water delivered prior to May 1, 1973, and all Table A water estimated to be delivered during the remainder of the Project repayment period (Table B-5B), would provide a sum at the end of the period financially equivalent to all Transportation Charges required under the water supply contract considering interest rate at the Project Interest Rate of 4.608 percent per annum.

(c) The Water System Revenue Bond Surcharge equivalent unit rate is calculated by multiplying Column 1 by the ratio of the 2010 WSRB surcharge to the sum of the Transportation Capital and the Capital component of the Delta Water Charge.

**TABLE B-26. Capital Costs of Each Aqueduct Reach
to be Reimbursed through the Capital Cost Component
of the East Branch Enlargement Transportation Charge**

(in dollars)

Sheet 1 of 2

| Calendar Year | CALIFORNIA AQUEDUCT | | | | | | | |
|------------------|---------------------|-----------|-----------|-----------|-----------|-----------|-------------|------------|
| | MOJAVE DIVISION | | | | | | | |
| | Reach 18A | Reach 19 | Reach 20A | Reach 20B | Reach 21 | Reach 22A | Reach 22B | Reach 23B |
| | [1] | [2] | [3] | [4] | [5] | [6] | [7] | [8] |
| 1952 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1953 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1954 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1955 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1956 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1957 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1958 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1959 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1960 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1968 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1969 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1970 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1972 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1973 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1974 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1975 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1976 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1977 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1978 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1979 | 117,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1980 | 200,000 | 0 | 0 | 0 | 0 | 0 | 0 | 74,000 |
| 1981 | 135,000 | 0 | 0 | 0 | 0 | 0 | 0 | 385,000 |
| 1982 | 1,503,000 | 0 | 0 | 0 | 0 | 0 | 0 | 1,586,000 |
| 1983 | 2,260,000 | 0 | 0 | 0 | 0 | 0 | 0 | 2,965,000 |
| 1984 | 735,000 | 0 | 0 | 0 | 0 | 0 | 796,000 | 1,380,000 |
| 1985 | 93,000 | 435,000 | 75,000 | 544,000 | 859,000 | 703,000 | 970,000 | 146,000 |
| 1986 | 784,000 | 4,477,000 | 3,144,000 | 2,234,000 | 1,569,000 | 1,203,000 | 1,808,000 | 34,000 |
| 1987 | 11,000 | 951,000 | 1,076,000 | 666,000 | 399,000 | 47,000 | 16,421,000 | 43,000 |
| 1988 | 1,000 | 125,000 | 1,681,000 | 1,730,000 | 2,024,000 | 40,000 | 13,326,000 | 70,000 |
| 1989 | 0 | 206,000 | 2,089,000 | 2,174,000 | 2,510,000 | 61,000 | 11,242,000 | 229,000 |
| 1990 | 1,000 | 577,000 | 903,000 | 735,000 | 928,000 | 194,000 | 20,131,000 | 887,000 |
| 1991 | 1,000 | 280,000 | 413,000 | 333,000 | 422,000 | 93,000 | 20,702,000 | 1,215,000 |
| 1992 | 0 | 40,000 | 41,000 | 39,000 | 35,000 | 13,000 | 9,599,000 | 3,719,000 |
| 1993 | 0 | 19,000 | 16,000 | 19,000 | 12,000 | 6,000 | 2,319,000 | 19,654,000 |
| 1994 | 0 | 2,000 | 3,000 | 2,000 | 4,000 | 3,000 | 803,000 | 3,173,000 |
| 1995 | 0 | 0 | 0 | 0 | 0 | 0 | 223,000 | 1,465,000 |
| 1996 | 0 | 0 | 0 | 0 | 0 | 0 | 6,014,000 | 478,000 |
| 1997 | 0 | 0 | 0 | 0 | 0 | 0 | 404,000 | 1,327,000 |
| 1998 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1999 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 5,841,000 | 7,112,000 | 9,441,000 | 8,476,000 | 8,762,000 | 2,363,000 | 104,758,000 | 38,830,000 |

**TABLE B-26. Capital Costs of Each Aqueduct Reach
to be Reimbursed through the Capital Cost Component
of the East Branch Enlargement Transportation Charge**

(in dollars)

Sheet 2 of 2

| Calendar Year | CALIFORNIA AQUEDUCT (continued) | | | | | | | GRAND TOTAL |
|------------------|---------------------------------|----------|-------------|--------------------|-------------|-----------|-------------|----------------|
| | MOJAVE DIVISION (continued) | | | SANTA ANA DIVISION | | | | |
| | Reach 23C | Reach 24 | Total | Reach 25 | Reach 26A | Reach 26B | Total | |
| | [9] | [10] | [11] | [12] | [13] | [14] | [15] | [16] |
| 1952 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1953 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1954 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1955 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1956 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1957 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1958 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1959 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1960 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1968 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1969 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1970 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1972 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1973 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1974 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1975 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1976 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1977 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1978 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1979 | 0 | 0 | 117,000 | 0 | 0 | 0 | 0 | 117,000 |
| 1980 | 0 | 0 | 274,000 | 0 | 0 | 0 | 0 | 274,000 |
| 1981 | 0 | 0 | 520,000 | 0 | 0 | 0 | 0 | 520,000 |
| 1982 | 0 | 0 | 3,089,000 | 0 | 0 | 0 | 0 | 3,089,000 |
| 1983 | 0 | 0 | 5,225,000 | 0 | 0 | 0 | 0 | 5,225,000 |
| 1984 | 0 | 0 | 2,911,000 | 0 | 0 | 0 | 0 | 2,911,000 |
| 1985 | 0 | 0 | 3,825,000 | 0 | 528,000 | 89,000 | 617,000 | 4,442,000 |
| 1986 | 25,000 | 0 | 15,278,000 | 0 | 1,926,000 | 154,000 | 2,080,000 | 17,358,000 |
| 1987 | 178,000 | 0 | 19,792,000 | 0 | 3,699,000 | 437,000 | 4,136,000 | 23,928,000 |
| 1988 | 632,000 | 0 | 19,629,000 | 0 | 5,667,000 | 3,329,000 | 8,996,000 | 28,625,000 |
| 1989 | 1,130,000 | 0 | 19,641,000 | 0 | 40,879,000 | 1,650,000 | 42,529,000 | 62,170,000 |
| 1990 | 2,066,000 | 0 | 26,422,000 | 0 | 29,853,000 | 1,650,000 | 31,503,000 | 57,925,000 |
| 1991 | 4,980,000 | 0 | 28,439,000 | 0 | 26,027,000 | 999,000 | 27,026,000 | 55,465,000 |
| 1992 | 11,920,000 | 0 | 25,406,000 | 0 | 15,317,000 | 299,000 | 15,616,000 | 41,022,000 |
| 1993 | 16,303,000 | 0 | 38,348,000 | 0 | 4,878,000 | 0 | 4,878,000 | 43,226,000 |
| 1994 | 7,081,000 | 0 | 11,071,000 | 0 | 3,151,000 | 0 | 3,151,000 | 14,222,000 |
| 1995 | 5,350,000 | 0 | 7,038,000 | 0 | 2,137,000 | 0 | 2,137,000 | 9,175,000 |
| 1996 | 1,706,000 | 0 | 8,198,000 | 0 | 9,181,000 | 0 | 9,181,000 | 17,379,000 |
| 1997 | 1,905,000 | 0 | 3,636,000 | 0 | 175,000 | 0 | 175,000 | 3,811,000 |
| 1998 | 28,000 | 0 | 28,000 | 0 | 0 | 0 | 0 | 28,000 |
| 1999 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 53,304,000 | 0 | 238,887,000 | 0 | 143,418,000 | 8,607,000 | 152,025,000 | 390,912,000 |

**TABLE B-27. Minimum OMP&R Costs of Each Aqueduct Reach
to be Reimbursed through Minimum OMP&R Component
of the East Branch Enlargement Transportation Charge**

(in dollars)

Sheet 1 of 2

| Calendar Year | CALIFORNIA AQUEDUCT | | | | | | | |
|------------------|---------------------|-----------|-----------|-----------|----------|-----------|------------|-----------|
| | MOJAVE DIVISION | | | | | | | |
| | Reach 18A | Reach 19 | Reach 20A | Reach 20B | Reach 21 | Reach 22A | Reach 22B | Reach 23B |
| | [1] | [2] | [3] | [4] | [5] | [6] | [7] | [8] |
| 1971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1972 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1973 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1974 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1975 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1976 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1977 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1978 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1979 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1980 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1981 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1982 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1983 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1984 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1985 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1986 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1987 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1988 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1989 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1990 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1991 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1992 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1993 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1994 | 0 | 0 | 0 | 0 | 0 | 0 | 1,048,625 | 0 |
| 1995 | 0 | 0 | 0 | 0 | 0 | 0 | 953,814 | 0 |
| 1996 | 0 | 0 | 0 | 0 | 0 | 0 | 1,171,411 | 0 |
| 1997 | 0 | 0 | 0 | 0 | 0 | 0 | 1,110,038 | 0 |
| 1998 | 0 | 0 | 0 | 0 | 0 | 0 | 1,213,002 | 0 |
| 1999 | 1,229 | 517 | 646 | 409 | 383 | 169 | 668,466 | 0 |
| 2000 | 4,452 | 1,875 | 2,340 | 1,484 | 1,386 | 614 | 1,318,563 | 0 |
| 2001 | 347 | 146 | 183 | 116 | 108 | 48 | 1,043,847 | 0 |
| 2002 | 1,639 | 690 | 861 | 546 | 510 | 226 | 1,541,104 | 0 |
| 2003 | 0 | 0 | 0 | 0 | 0 | 0 | 1,838,086 | 0 |
| 2004 | 2,132 | 27,868 | 18,579 | 18,731 | 10,355 | 8,528 | 1,503,460 | 0 |
| 2005 | 1,243 | 16,250 | 10,833 | 10,922 | 6,038 | 4,973 | 1,038,618 | 0 |
| 2006 | 4,632 | 60,550 | 40,367 | 40,697 | 22,499 | 18,529 | 1,484,886 | 0 |
| 2007 | 13,123 | 171,531 | 114,354 | 115,291 | 63,738 | 52,490 | 1,732,297 | 0 |
| 2008 | 28,340 | 370,451 | 246,967 | 248,992 | 137,654 | 113,362 | 2,802,377 | 0 |
| 2009 | 37,593 | 491,395 | 327,597 | 330,282 | 182,595 | 150,372 | 2,886,724 | 0 |
| 2010 | 0 | 0 | 0 | 0 | 0 | 0 | 2,159,672 | 0 |
| 2011 | 0 | 0 | 0 | 0 | 0 | 0 | 2,056,501 | 0 |
| 2012 | 0 | 0 | 0 | 0 | 0 | 0 | 2,325,411 | 0 |
| 2013 | 0 | 0 | 0 | 0 | 0 | 0 | 2,325,411 | 0 |
| 2014 | 0 | 0 | 0 | 0 | 0 | 0 | 2,325,411 | 0 |
| 2015 | 0 | 0 | 0 | 0 | 0 | 0 | 2,325,411 | 0 |
| 2016 | 0 | 0 | 0 | 0 | 0 | 0 | 2,325,411 | 0 |
| 2017 | 0 | 0 | 0 | 0 | 0 | 0 | 2,325,411 | 0 |
| 2018 | 0 | 0 | 0 | 0 | 0 | 0 | 2,325,411 | 0 |
| 2019 | 0 | 0 | 0 | 0 | 0 | 0 | 2,325,411 | 0 |
| 2020 | 0 | 0 | 0 | 0 | 0 | 0 | 2,325,411 | 0 |
| 2021 | 0 | 0 | 0 | 0 | 0 | 0 | 2,325,411 | 0 |
| 2022 | 0 | 0 | 0 | 0 | 0 | 0 | 2,325,411 | 0 |
| 2023 | 0 | 0 | 0 | 0 | 0 | 0 | 2,325,411 | 0 |
| 2024 | 0 | 0 | 0 | 0 | 0 | 0 | 2,325,411 | 0 |
| 2025 | 0 | 0 | 0 | 0 | 0 | 0 | 2,325,411 | 0 |
| 2026 | 0 | 0 | 0 | 0 | 0 | 0 | 2,325,411 | 0 |
| 2027 | 0 | 0 | 0 | 0 | 0 | 0 | 2,325,411 | 0 |
| 2028 | 0 | 0 | 0 | 0 | 0 | 0 | 2,325,411 | 0 |
| 2029 | 0 | 0 | 0 | 0 | 0 | 0 | 2,325,411 | 0 |
| 2030 | 0 | 0 | 0 | 0 | 0 | 0 | 2,325,411 | 0 |
| 2031 | 0 | 0 | 0 | 0 | 0 | 0 | 2,325,411 | 0 |
| 2032 | 0 | 0 | 0 | 0 | 0 | 0 | 2,325,411 | 0 |
| 2033 | 0 | 0 | 0 | 0 | 0 | 0 | 2,325,411 | 0 |
| 2034 | 0 | 0 | 0 | 0 | 0 | 0 | 2,325,411 | 0 |
| 2035 | 0 | 0 | 0 | 0 | 0 | 0 | 2,325,411 | 0 |
| TOTAL | 94,730 | 1,141,273 | 762,727 | 767,470 | 425,266 | 349,311 | 83,381,362 | 0 |

**TABLE B-27. Minimum OMP&R Costs of Each Aqueduct Reach
to be Reimbursed through Minimum OMP&R Component
of the East Branch Enlargement Transportation Charge**

(in dollars)

Sheet 2 of 2

| Calendar Year | CALIFORNIA AQUEDUCT (continued) | | | | | | | TOTAL |
|------------------|---------------------------------|----------|-------------|--------------------|---------------|-----------|-------------|-------------|
| | MOJAVE DIVISION (continued) | | | SANTA ANA DIVISION | | | | |
| | Reach 23C | Reach 24 | Subtotal | Reach 25 | Reach 26A (a) | Reach 26B | Subtotal | |
| | [9] | [10] | [11] | [12] | [13] | [14] | [15] | [16] |
| 1971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1972 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1973 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1974 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1975 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1976 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1977 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1978 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1979 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1980 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1981 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1982 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1983 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1984 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1985 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1986 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1987 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1988 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1989 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1990 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1991 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1992 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1993 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1994 | 0 | 0 | 1,048,625 | 0 | 1,713,260 | 0 | 1,713,260 | 2,761,885 |
| 1995 | 0 | 0 | 953,814 | 0 | 1,452,549 | 0 | 1,452,549 | 2,406,363 |
| 1996 | 0 | 0 | 1,171,411 | 0 | 1,350,581 | 0 | 1,350,581 | 2,521,992 |
| 1997 | 679,826 | 0 | 1,789,864 | 0 | 1,528,509 | 0 | 1,528,509 | 3,318,373 |
| 1998 | 825,038 | 0 | 2,038,040 | 0 | 1,619,068 | 0 | 1,619,068 | 3,657,108 |
| 1999 | 382,178 | 0 | 1,053,997 | 0 | 956,229 | 0 | 956,229 | 2,010,226 |
| 2000 | 735,806 | 0 | 2,066,520 | 0 | 1,410,400 | 0 | 1,410,400 | 3,476,920 |
| 2001 | 812,638 | 0 | 1,857,433 | 0 | 808,751 | 0 | 808,751 | 2,666,184 |
| 2002 | 729,338 | 0 | 2,274,914 | 0 | 1,142,811 | 0 | 1,142,811 | 3,417,725 |
| 2003 | 915,966 | 0 | 2,754,052 | 0 | 1,278,730 | 0 | 1,278,730 | 4,032,781 |
| 2004 | 933,012 | 0 | 2,522,665 | 0 | 1,854,027 | 0 | 1,854,027 | 4,376,692 |
| 2005 | 1,041,964 | 0 | 2,130,841 | 0 | 1,865,205 | 0 | 1,865,205 | 3,996,046 |
| 2006 | 832,178 | 0 | 2,504,338 | 0 | 1,715,482 | 0 | 1,715,482 | 4,219,820 |
| 2007 | 1,417,923 | 0 | 3,680,747 | 0 | 2,323,223 | 0 | 2,323,223 | 6,003,970 |
| 2008 | 1,031,704 | 0 | 4,979,847 | 0 | 2,620,795 | 0 | 2,620,795 | 7,600,642 |
| 2009 | 1,312,373 | 0 | 5,718,931 | 0 | 2,938,636 | 0 | 2,938,636 | 8,657,567 |
| 2010 | 1,568,133 | 0 | 3,727,805 | 0 | 2,573,726 | 0 | 2,573,726 | 6,301,531 |
| 2011 | 1,327,456 | 0 | 3,383,956 | 0 | 3,065,624 | 0 | 3,065,624 | 6,449,581 |
| 2012 | 1,396,927 | 0 | 3,722,339 | 0 | 2,907,231 | 0 | 2,907,231 | 6,629,569 |
| 2013 | 1,396,927 | 0 | 3,722,339 | 0 | 2,907,231 | 0 | 2,907,231 | 6,629,569 |
| 2014 | 1,396,927 | 0 | 3,722,339 | 0 | 2,907,231 | 0 | 2,907,231 | 6,629,569 |
| 2015 | 1,396,927 | 0 | 3,722,339 | 0 | 2,907,231 | 0 | 2,907,231 | 6,629,569 |
| 2016 | 1,396,927 | 0 | 3,722,339 | 0 | 2,907,231 | 0 | 2,907,231 | 6,629,569 |
| 2017 | 1,396,927 | 0 | 3,722,339 | 0 | 2,907,231 | 0 | 2,907,231 | 6,629,569 |
| 2018 | 1,396,927 | 0 | 3,722,339 | 0 | 2,907,231 | 0 | 2,907,231 | 6,629,569 |
| 2019 | 1,396,927 | 0 | 3,722,339 | 0 | 2,907,231 | 0 | 2,907,231 | 6,629,569 |
| 2020 | 1,396,927 | 0 | 3,722,339 | 0 | 2,907,231 | 0 | 2,907,231 | 6,629,569 |
| 2021 | 1,396,927 | 0 | 3,722,339 | 0 | 2,907,231 | 0 | 2,907,231 | 6,629,569 |
| 2022 | 1,396,927 | 0 | 3,722,339 | 0 | 2,907,231 | 0 | 2,907,231 | 6,629,569 |
| 2023 | 1,396,927 | 0 | 3,722,339 | 0 | 2,907,231 | 0 | 2,907,231 | 6,629,569 |
| 2024 | 1,396,927 | 0 | 3,722,339 | 0 | 2,907,231 | 0 | 2,907,231 | 6,629,569 |
| 2025 | 1,396,927 | 0 | 3,722,339 | 0 | 2,907,231 | 0 | 2,907,231 | 6,629,569 |
| 2026 | 1,396,927 | 0 | 3,722,339 | 0 | 2,907,231 | 0 | 2,907,231 | 6,629,569 |
| 2027 | 1,396,927 | 0 | 3,722,339 | 0 | 2,907,231 | 0 | 2,907,231 | 6,629,569 |
| 2028 | 1,396,927 | 0 | 3,722,339 | 0 | 2,907,231 | 0 | 2,907,231 | 6,629,569 |
| 2029 | 1,396,927 | 0 | 3,722,339 | 0 | 2,907,231 | 0 | 2,907,231 | 6,629,569 |
| 2030 | 1,396,927 | 0 | 3,722,339 | 0 | 2,907,231 | 0 | 2,907,231 | 6,629,569 |
| 2031 | 1,396,927 | 0 | 3,722,339 | 0 | 2,907,231 | 0 | 2,907,231 | 6,629,569 |
| 2032 | 1,396,927 | 0 | 3,722,339 | 0 | 2,907,231 | 0 | 2,907,231 | 6,629,569 |
| 2033 | 1,396,927 | 0 | 3,722,339 | 0 | 2,907,231 | 0 | 2,907,231 | 6,629,569 |
| 2034 | 1,396,927 | 0 | 3,722,339 | 0 | 2,907,231 | 0 | 2,907,231 | 6,629,569 |
| 2035 | 1,396,927 | 0 | 3,722,339 | 0 | 2,907,231 | 0 | 2,907,231 | 6,629,569 |
| TOTAL | 48,071,788 | 0 | 134,993,926 | 0 | 101,991,143 | 0 | 101,991,143 | 236,985,068 |

(a) Units 3 and 4 at Devil Canyon Powerplant were operational in 1993.

**TABLE B-28. Capital Costs of East Branch Enlargement
Transportation Facilities Allocated to Each Contractor**

(in dollars)

| Calendar Year | SOUTHERN CALIFORNIA AREA | | | | | | | Total |
|------------------|---|--|---------------------------|---------------------------|-------------------------------|--|--|-------------|
| | Antelope Valley- East Kern Water Agency | Coachella Valley Water District | Desert Water Agency | Mojave Water Agency | Palmdale Water District | San Bernardino Valley Municipal Water District | The Metropolitan Water District of Southern California | |
| | [1] | [2] | [3] | [4] | [5] | [6] | [7] | [8] |
| 1971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1972 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1973 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1974 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1975 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1976 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1977 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1978 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1979 | 0 | 11,731 | 1,010 | 10,566 | 466 | 0 | 93,227 | 117,000 |
| 1980 | 0 | 28,241 | 4,708 | 27,495 | 797 | 0 | 212,759 | 274,000 |
| 1981 | 0 | 56,134 | 16,676 | 61,271 | 538 | 0 | 385,381 | 520,000 |
| 1982 | 0 | 326,180 | 76,872 | 337,913 | 5,988 | 0 | 2,342,047 | 3,089,000 |
| 1983 | 0 | 554,658 | 138,964 | 582,070 | 9,004 | 0 | 3,940,304 | 5,225,000 |
| 1984 | 0 | 306,514 | 68,842 | 314,468 | 2,928 | 0 | 2,218,248 | 2,911,000 |
| 1985 | 49,675 | 447,266 | 65,773 | 347,262 | 4,514 | 21,614 | 3,505,896 | 4,442,000 |
| 1986 | 185,353 | 1,757,633 | 236,324 | 1,363,586 | 41,900 | 78,842 | 13,694,362 | 17,358,000 |
| 1987 | 49,735 | 2,455,279 | 378,535 | 1,774,447 | 10,615 | 151,421 | 19,107,968 | 23,928,000 |
| 1988 | 124,534 | 2,689,959 | 500,466 | 1,712,431 | 13,783 | 231,982 | 23,351,845 | 28,625,000 |
| 1989 | 155,446 | 7,118,094 | 2,423,000 | 1,671,088 | 17,419 | 1,673,409 | 49,111,544 | 62,170,000 |
| 1990 | 62,786 | 6,459,229 | 1,943,918 | 2,234,452 | 8,680 | 1,222,053 | 45,993,882 | 57,925,000 |
| 1991 | 28,686 | 6,265,822 | 1,875,066 | 2,168,712 | 4,024 | 1,065,433 | 44,057,257 | 55,465,000 |
| 1992 | 2,911 | 4,826,764 | 1,610,921 | 1,359,335 | 471 | 627,012 | 32,594,586 | 41,022,000 |
| 1993 | 1,205 | 5,094,237 | 1,828,410 | 2,722,156 | 212 | 199,684 | 33,380,096 | 43,226,000 |
| 1994 | 273 | 1,726,376 | 631,816 | 478,543 | 27 | 128,988 | 11,255,977 | 14,222,000 |
| 1995 | 0 | 1,130,963 | 423,243 | 206,978 | 0 | 87,480 | 7,326,336 | 9,175,000 |
| 1996 | 0 | 2,025,987 | 645,296 | 606,205 | 0 | 375,830 | 13,725,682 | 17,379,000 |
| 1997 | 0 | 451,011 | 154,366 | 205,796 | 0 | 7,164 | 2,992,663 | 3,811,000 |
| 1998 | 0 | 3,551 | 1,293 | 0 | 0 | 0 | 23,156 | 28,000 |
| 1999 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 660,604 | 43,735,629 | 13,025,499 | 18,184,774 | 121,366 | 5,870,912 | 309,313,216 | 390,912,000 |

**TABLE B-29. Capital Cost Component of East Branch Enlargement
Facilities Transportation Charge for Each Contractor**

(in dollars)

| Calendar Year | SOUTHERN CALIFORNIA AREA | | | | | | | Total |
|------------------|---|--|---------------------------|---------------------------|-------------------------------|---|---|---------------|
| | Antelope Valley - East Kern Water Agency | Coachella Valley Water District | Desert Water Agency | Mojave Water Agency | Palmdale Water District | San Bernardino Valley Municipal Water District (a) | The Metropolitan Water District of Southern California | |
| | [1] | [2] | [3] | [4] | [5] | [6] | [7] | [8] |
| 1971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1972 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1973 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1974 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1975 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1976 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1977 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1978 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1979 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1980 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1981 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1982 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1983 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1984 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1985 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1986 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1987 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1988 | 18,266 | 1,209,293 | 360,156 | 502,810 | 3,356 | 0 | 8,552,529 | 10,646,410 |
| 1989 | 19,176 | 1,269,524 | 378,094 | 527,854 | 3,523 | 0 | 8,978,504 | 11,176,675 |
| 1990 | 19,186 | 1,270,244 | 378,308 | 528,153 | 3,525 | 0 | 8,983,597 | 11,183,013 |
| 1991 | 19,187 | 1,270,261 | 378,314 | 528,160 | 3,525 | 0 | 8,983,717 | 11,183,164 |
| 1992 | 38,420 | 2,543,616 | 757,549 | 1,057,606 | 7,059 | 0 | 17,989,315 | 22,393,565 |
| 1993 | 40,029 | 2,650,139 | 789,274 | 1,101,897 | 7,354 | 0 | 18,742,682 | 23,331,375 |
| 1994 | 39,705 | 2,628,706 | 782,890 | 1,092,986 | 7,295 | 0 | 18,591,099 | 23,142,681 |
| 1995 | 39,632 | 2,623,828 | 781,438 | 1,090,958 | 7,281 | 0 | 18,556,603 | 23,099,740 |
| 1996 | 39,825 | 2,636,667 | 785,261 | 1,096,296 | 7,317 | 0 | 18,647,406 | 23,212,772 |
| 1997 | 41,743 | 2,763,629 | 823,074 | 1,149,085 | 7,669 | 0 | 19,545,322 | 24,330,522 |
| 1998 | 42,642 | 2,823,126 | 840,793 | 1,173,823 | 7,834 | 0 | 19,966,108 | 24,854,326 |
| 1999 | 44,738 | 2,961,887 | 882,120 | 1,231,519 | 8,219 | 0 | 20,947,475 | 26,075,958 |
| 2000 | 49,031 | 3,246,109 | 966,768 | 1,349,695 | 9,008 | 0 | 22,957,586 | 28,578,197 |
| 2001 | 49,048 | 3,247,263 | 967,111 | 1,350,175 | 9,011 | 0 | 22,965,748 | 28,588,356 |
| 2002 | 47,894 | 3,170,848 | 944,353 | 1,318,402 | 8,799 | 0 | 22,425,319 | 27,915,615 |
| 2003 | 40,765 | 2,698,871 | 803,787 | 1,122,160 | 7,489 | 0 | 19,087,337 | 23,760,409 |
| 2004 | 44,199 | 2,926,222 | 871,498 | 1,216,690 | 8,120 | 0 | 20,695,237 | 25,761,966 |
| 2005 | 32,668 | 2,162,783 | 644,128 | 899,261 | 6,002 | 0 | 15,295,938 | 19,040,780 |
| 2006 | 46,979 | 3,110,276 | 926,313 | 1,293,217 | 8,631 | 0 | 21,996,927 | 27,382,343 |
| 2007 | 45,289 | 2,998,370 | 892,985 | 1,246,688 | 8,321 | 0 | 21,205,489 | 26,397,142 |
| 2008 | 42,495 | 2,813,410 | 837,900 | 1,169,784 | 7,807 | 0 | 19,897,390 | 24,768,786 |
| 2009 | 43,641 | 2,889,247 | 860,486 | 1,201,316 | 8,018 | 0 | 20,433,739 | 25,436,447 |
| 2010 | 64,300 | 4,332,403 | 1,300,256 | 1,770,031 | 11,814 | 0 | 30,575,815 | 38,054,619 |
| 2011 | 65,966 | 4,452,944 | 1,337,509 | 1,815,896 | 12,119 | 0 | 31,419,576 | 39,104,010 |
| 2012 | 66,076 | 4,460,428 | 1,339,762 | 1,818,928 | 12,139 | 0 | 31,472,346 | 39,169,679 |
| 2013 | 65,393 | 4,414,549 | 1,326,018 | 1,800,107 | 12,014 | 0 | 31,148,389 | 38,766,470 |
| 2014 | 65,950 | 4,441,153 | 1,332,595 | 1,815,401 | 12,115 | 0 | 31,345,243 | 39,012,457 |
| 2015 | 67,665 | 4,557,952 | 1,367,803 | 1,862,640 | 12,432 | 0 | 32,168,573 | 40,037,065 |
| 2016 | 67,849 | 4,570,214 | 1,371,461 | 1,867,716 | 12,465 | 0 | 32,255,241 | 40,144,946 |
| 2017 | 69,538 | 4,678,880 | 1,403,411 | 1,914,200 | 12,775 | 0 | 33,026,442 | 41,105,246 |
| 2018 | 67,986 | 4,566,607 | 1,368,708 | 1,871,497 | 12,491 | 0 | 32,240,592 | 40,127,881 |
| 2019 | 69,893 | 4,703,199 | 1,410,760 | 1,923,976 | 12,841 | 0 | 33,197,744 | 41,318,413 |
| 2020 | 66,912 | 4,492,047 | 1,346,042 | 1,841,942 | 12,294 | 0 | 31,716,241 | 39,475,478 |
| 2021 | 68,263 | 4,587,187 | 1,375,141 | 1,879,098 | 12,541 | 0 | 32,384,174 | 40,306,404 |
| 2022 | 67,588 | 4,545,199 | 1,362,991 | 1,860,524 | 12,417 | 0 | 32,084,921 | 39,933,640 |
| 2023 | 55,789 | 3,762,924 | 1,129,863 | 1,535,729 | 10,250 | 0 | 26,553,372 | 33,047,927 |
| 2024 | 57,704 | 3,890,155 | 1,167,812 | 1,588,453 | 10,601 | 0 | 27,452,834 | 34,167,559 |
| 2025 | 66,068 | 4,443,042 | 1,332,364 | 1,818,684 | 12,138 | 0 | 31,363,740 | 39,036,036 |
| 2026 | 23,846 | 1,627,474 | 491,144 | 656,422 | 4,381 | 0 | 11,468,393 | 14,271,660 |
| 2027 | 24,354 | 1,665,863 | 503,201 | 670,426 | 4,475 | 0 | 11,735,870 | 14,604,189 |
| 2028 | 15,584 | 1,069,659 | 323,583 | 428,985 | 2,863 | 0 | 7,532,579 | 9,373,253 |
| 2029 | 16,321 | 1,121,370 | 339,371 | 449,272 | 2,998 | 0 | 7,895,807 | 9,825,139 |
| 2030 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2031 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2032 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2033 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2034 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2035 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 1,977,603 | 132,297,568 | 39,582,395 | 54,438,462 | 363,326 | 0 | 934,482,959 | 1,163,142,313 |

(a) Under Article 49(d)(4)(A) of its contract, San Bernardino Valley Municipal Water District elected to pay a portion of its allocated costs of East Branch Enlargement in advance rather than to participate in payment of Water System Revenue Bonds. This election made via a letter of agreement signed June 1, 1987. As of June 1999, \$6,347,938 has been received from the San Bernardino Valley Municipal Water District.

TABLE B-30. Minimum OMP&R Component of East Branch Enlargement Facilities Transportation Charge for Each Contractor

(in dollars)

| Calendar Year | SOUTHERN CALIFORNIA AREA | | | | | | | Total |
|---------------|--|---------------------------------|---------------------|---------------------|-------------------------|--|--|-------------|
| | Antelope Valley-East Kern Water Agency | Coachella Valley Water District | Desert Water Agency | Mojave Water Agency | Palmdale Water District | San Bernardino Valley Municipal Water District | The Metropolitan Water District of Southern California | |
| | [1] | [2] | [3] | [4] | [5] | [6] | [7] | [8] |
| 1971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1972 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1973 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1974 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1975 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1976 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1977 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1978 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1979 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1980 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1981 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1982 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1983 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1984 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1985 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1986 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1987 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1988 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1989 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1990 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1991 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1992 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1993 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1994 | 0 | 320,415 | 101,486 | 95,075 | 0 | 70,133 | 2,174,776 | 2,761,885 |
| 1995 | 0 | 278,176 | 86,604 | 86,479 | 0 | 59,461 | 1,895,643 | 2,406,363 |
| 1996 | 0 | 287,293 | 82,991 | 106,208 | 0 | 55,287 | 1,990,213 | 2,521,992 |
| 1997 | 0 | 389,636 | 123,446 | 100,643 | 0 | 62,571 | 2,642,077 | 3,318,373 |
| 1998 | 0 | 429,772 | 135,927 | 109,979 | 0 | 66,278 | 2,915,152 | 3,657,108 |
| 1999 | 37 | 236,006 | 75,040 | 60,907 | 11 | 39,144 | 1,599,081 | 2,010,226 |
| 2000 | 132 | 404,121 | 121,572 | 120,636 | 40 | 57,736 | 2,772,683 | 3,476,920 |
| 2001 | 10 | 309,647 | 90,195 | 94,727 | 3 | 33,107 | 2,138,494 | 2,666,183 |
| 2002 | 49 | 391,384 | 108,705 | 140,126 | 15 | 46,782 | 2,730,665 | 3,417,726 |
| 2003 | 0 | 461,547 | 127,188 | 166,653 | 0 | 52,346 | 3,225,047 | 4,032,781 |
| 2004 | 1,278 | 510,690 | 156,835 | 143,989 | 265 | 75,896 | 3,487,739 | 4,376,692 |
| 2005 | 745 | 475,562 | 158,134 | 98,643 | 154 | 76,353 | 3,186,455 | 3,996,046 |
| 2006 | 2,777 | 488,653 | 145,407 | 151,305 | 575 | 70,224 | 3,360,879 | 4,219,820 |
| 2007 | 7,866 | 697,987 | 210,296 | 204,302 | 1,630 | 95,103 | 4,786,787 | 6,003,971 |
| 2008 | 16,988 | 854,875 | 223,021 | 356,106 | 3,520 | 107,284 | 6,038,849 | 7,600,643 |
| 2009 | 22,534 | 975,799 | 257,037 | 397,062 | 4,669 | 120,295 | 6,880,172 | 8,657,568 |
| 2010 | 0 | 739,022 | 229,930 | 195,810 | 0 | 105,357 | 5,031,412 | 6,301,531 |
| 2011 | 0 | 775,819 | 241,447 | 210,837 | 0 | 119,009 | 5,282,457 | 6,629,569 |
| 2012 | 0 | 775,819 | 241,447 | 210,837 | 0 | 119,009 | 5,282,457 | 6,629,569 |
| 2013 | 0 | 775,819 | 241,447 | 210,837 | 0 | 119,009 | 5,282,457 | 6,629,569 |
| 2014 | 0 | 775,819 | 241,447 | 210,837 | 0 | 119,009 | 5,282,457 | 6,629,569 |
| 2015 | 0 | 775,819 | 241,447 | 210,837 | 0 | 119,009 | 5,282,457 | 6,629,569 |
| 2016 | 0 | 775,819 | 241,447 | 210,837 | 0 | 119,009 | 5,282,457 | 6,629,569 |
| 2017 | 0 | 775,819 | 241,447 | 210,837 | 0 | 119,009 | 5,282,457 | 6,629,569 |
| 2018 | 0 | 775,819 | 241,447 | 210,837 | 0 | 119,009 | 5,282,457 | 6,629,569 |
| 2019 | 0 | 775,819 | 241,447 | 210,837 | 0 | 119,009 | 5,282,457 | 6,629,569 |
| 2020 | 0 | 775,819 | 241,447 | 210,837 | 0 | 119,009 | 5,282,457 | 6,629,569 |
| 2021 | 0 | 775,819 | 241,447 | 210,837 | 0 | 119,009 | 5,282,457 | 6,629,569 |
| 2022 | 0 | 775,819 | 241,447 | 210,837 | 0 | 119,009 | 5,282,457 | 6,629,569 |
| 2023 | 0 | 775,819 | 241,447 | 210,837 | 0 | 119,009 | 5,282,457 | 6,629,569 |
| 2024 | 0 | 775,819 | 241,447 | 210,837 | 0 | 119,009 | 5,282,457 | 6,629,569 |
| 2025 | 0 | 775,819 | 241,447 | 210,837 | 0 | 119,009 | 5,282,457 | 6,629,569 |
| 2026 | 0 | 775,819 | 241,447 | 210,837 | 0 | 119,009 | 5,282,457 | 6,629,569 |
| 2027 | 0 | 775,819 | 241,447 | 210,837 | 0 | 119,009 | 5,282,457 | 6,629,569 |
| 2028 | 0 | 775,819 | 241,447 | 210,837 | 0 | 119,009 | 5,282,457 | 6,629,569 |
| 2029 | 0 | 775,819 | 241,447 | 210,837 | 0 | 119,009 | 5,282,457 | 6,629,569 |
| 2030 | 0 | 775,819 | 241,447 | 210,837 | 0 | 119,009 | 5,282,457 | 6,629,569 |
| 2031 | 0 | 775,819 | 241,447 | 210,837 | 0 | 119,009 | 5,282,457 | 6,629,569 |
| 2032 | 0 | 775,819 | 241,447 | 210,837 | 0 | 119,009 | 5,282,457 | 6,629,569 |
| 2033 | 0 | 775,819 | 241,447 | 210,837 | 0 | 119,009 | 5,282,457 | 6,629,569 |
| 2034 | 0 | 775,819 | 241,447 | 210,837 | 0 | 119,009 | 5,282,457 | 6,629,569 |
| 2035 | 0 | 775,819 | 241,447 | 210,837 | 0 | 119,009 | 5,282,457 | 6,629,569 |
| TOTAL | 52,416 | 27,630,044 | 8,472,993 | 7,875,194 | 10,882 | 4,175,066 | 188,768,470 | 236,985,065 |

**TABLE B-31. Total East Branch Enlargement Facilities
Transportation Charge for Each Contractor**

(in dollars)

| Calendar Year | SOUTHERN CALIFORNIA AREA | | | | | | | Total |
|------------------|---|--|---------------------------|---------------------------|-------------------------------|--|--|---------------|
| | Antelope Valley- East Kern Water Agency | Coachella Valley Water District | Desert Water Agency | Mojave Water Agency | Palmdale Water District | San Bernardino Valley Municipal Water District | The Metropolitan Water District of Southern California | |
| | [1] | [2] | [3] | [4] | [5] | [6] | [7] | [8] |
| 1971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1972 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1973 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1974 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1975 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1976 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1977 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1978 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1979 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1980 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1981 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1982 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1983 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1984 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1985 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1986 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1987 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1988 | 18,266 | 1,209,293 | 360,156 | 502,810 | 3,356 | 0 | 8,552,529 | 10,646,410 |
| 1989 | 19,176 | 1,269,524 | 378,094 | 527,854 | 3,523 | 0 | 8,978,504 | 11,176,675 |
| 1990 | 19,186 | 1,270,244 | 378,308 | 528,153 | 3,525 | 0 | 8,983,597 | 11,183,013 |
| 1991 | 19,187 | 1,270,261 | 378,314 | 528,160 | 3,525 | 0 | 8,983,717 | 11,183,164 |
| 1992 | 38,420 | 2,543,616 | 757,549 | 1,057,606 | 7,059 | 0 | 17,989,315 | 22,393,565 |
| 1993 | 40,029 | 2,650,139 | 789,274 | 1,101,897 | 7,354 | 0 | 18,742,682 | 23,331,375 |
| 1994 | 39,705 | 2,949,121 | 884,376 | 1,188,061 | 7,295 | 70,133 | 20,765,875 | 25,904,566 |
| 1995 | 39,632 | 2,902,004 | 868,042 | 1,177,437 | 7,281 | 59,461 | 20,452,246 | 25,506,103 |
| 1996 | 39,825 | 2,923,960 | 868,252 | 1,202,504 | 7,317 | 55,287 | 20,637,619 | 25,734,764 |
| 1997 | 41,743 | 3,153,265 | 946,520 | 1,249,728 | 7,669 | 62,571 | 22,187,399 | 27,648,895 |
| 1998 | 42,642 | 3,252,898 | 976,720 | 1,283,802 | 7,834 | 66,278 | 22,881,260 | 28,511,434 |
| 1999 | 44,775 | 3,197,893 | 957,160 | 1,292,426 | 8,230 | 39,144 | 22,546,556 | 28,086,184 |
| 2000 | 49,163 | 3,650,230 | 1,088,340 | 1,470,331 | 9,048 | 57,736 | 25,730,269 | 32,055,117 |
| 2001 | 49,058 | 3,556,910 | 1,057,306 | 1,444,902 | 9,014 | 33,107 | 25,104,242 | 31,254,539 |
| 2002 | 47,943 | 3,562,232 | 1,053,058 | 1,458,528 | 8,814 | 46,782 | 25,155,984 | 31,333,341 |
| 2003 | 40,765 | 3,160,418 | 930,975 | 1,288,813 | 7,489 | 52,346 | 22,312,384 | 27,793,190 |
| 2004 | 45,477 | 3,436,912 | 1,028,333 | 1,360,679 | 8,385 | 75,896 | 24,182,976 | 30,138,658 |
| 2005 | 33,413 | 2,638,345 | 802,262 | 997,904 | 6,156 | 76,353 | 18,482,393 | 23,036,826 |
| 2006 | 49,756 | 3,598,929 | 1,071,720 | 1,444,522 | 9,206 | 70,224 | 25,357,806 | 31,602,163 |
| 2007 | 53,155 | 3,696,357 | 1,103,281 | 1,450,990 | 9,951 | 95,103 | 25,992,276 | 32,401,113 |
| 2008 | 59,483 | 3,668,285 | 1,060,921 | 1,525,890 | 11,327 | 107,284 | 25,936,239 | 32,369,429 |
| 2009 | 66,175 | 3,865,046 | 1,117,523 | 1,598,378 | 12,687 | 120,295 | 27,313,911 | 34,094,015 |
| 2010 | 64,300 | 5,071,425 | 1,530,186 | 1,965,841 | 11,814 | 105,357 | 35,607,227 | 44,356,150 |
| 2011 | 65,966 | 5,212,747 | 1,581,960 | 2,002,352 | 12,119 | 125,493 | 36,552,954 | 45,553,591 |
| 2012 | 66,076 | 5,236,247 | 1,581,209 | 2,029,765 | 12,139 | 119,009 | 36,754,803 | 45,799,248 |
| 2013 | 65,393 | 5,190,368 | 1,567,465 | 2,010,944 | 12,014 | 119,009 | 36,430,846 | 45,396,039 |
| 2014 | 65,950 | 5,216,972 | 1,574,042 | 2,026,238 | 12,115 | 119,009 | 36,627,700 | 45,642,026 |
| 2015 | 67,665 | 5,333,771 | 1,609,250 | 2,073,477 | 12,432 | 119,009 | 37,451,030 | 46,666,634 |
| 2016 | 67,849 | 5,346,033 | 1,612,908 | 2,078,553 | 12,465 | 119,009 | 37,537,698 | 46,774,515 |
| 2017 | 69,538 | 5,454,699 | 1,644,858 | 2,125,037 | 12,775 | 119,009 | 38,308,899 | 47,734,815 |
| 2018 | 67,986 | 5,342,426 | 1,610,155 | 2,082,334 | 12,491 | 119,009 | 37,523,049 | 46,757,450 |
| 2019 | 69,893 | 5,479,018 | 1,652,207 | 2,134,813 | 12,841 | 119,009 | 38,480,201 | 47,947,982 |
| 2020 | 66,912 | 5,267,866 | 1,587,489 | 2,052,779 | 12,294 | 119,009 | 36,998,698 | 46,105,047 |
| 2021 | 68,263 | 5,363,006 | 1,616,588 | 2,089,935 | 12,541 | 119,009 | 37,666,631 | 46,935,973 |
| 2022 | 67,588 | 5,321,018 | 1,604,438 | 2,071,361 | 12,417 | 119,009 | 37,367,378 | 46,563,209 |
| 2023 | 55,789 | 4,538,743 | 1,371,310 | 1,746,566 | 10,250 | 119,009 | 31,835,829 | 39,677,496 |
| 2024 | 57,704 | 4,665,974 | 1,409,259 | 1,799,290 | 10,601 | 119,009 | 32,735,291 | 40,797,128 |
| 2025 | 66,068 | 5,218,861 | 1,573,811 | 2,029,521 | 12,138 | 119,009 | 36,646,197 | 45,665,605 |
| 2026 | 23,846 | 2,403,293 | 732,591 | 867,259 | 4,381 | 119,009 | 16,750,850 | 20,901,229 |
| 2027 | 24,354 | 2,441,682 | 744,648 | 881,263 | 4,475 | 119,009 | 17,018,327 | 21,233,758 |
| 2028 | 15,584 | 1,845,478 | 565,030 | 639,822 | 2,863 | 119,009 | 12,815,036 | 16,002,822 |
| 2029 | 16,321 | 1,897,189 | 580,818 | 660,109 | 2,998 | 119,009 | 13,178,264 | 16,454,708 |
| 2030 | 0 | 775,819 | 241,447 | 210,837 | 0 | 119,009 | 5,282,457 | 6,629,569 |
| 2031 | 0 | 775,819 | 241,447 | 210,837 | 0 | 119,009 | 5,282,457 | 6,629,569 |
| 2032 | 0 | 775,819 | 241,447 | 210,837 | 0 | 119,009 | 5,282,457 | 6,629,569 |
| 2033 | 0 | 775,819 | 241,447 | 210,837 | 0 | 119,009 | 5,282,457 | 6,629,569 |
| 2034 | 0 | 775,819 | 241,447 | 210,837 | 0 | 119,009 | 5,282,457 | 6,629,569 |
| 2035 | 0 | 775,819 | 241,447 | 210,837 | 0 | 119,009 | 5,282,457 | 6,629,569 |
| TOTAL | 2,030,019 | 159,927,612 | 48,055,388 | 62,313,656 | 374,208 | 4,175,066 | 1,123,251,429 | 1,400,127,378 |

| CONVERSION FACTORS | | | | |
|--|--|---|----------------------------|---|
| Quantity | To convert from customary unit | To metric units | Multiply customary unit by | To convert to customary unit, multiply metric unit by |
| Length | inches (in) | millimeters (mm)● | 25.4 | 0.03937 |
| | inches (in) | centimeters (cm) | 2.54 | 0.3937 |
| | feet (ft) | meters (m) | 0.3048 | 3.2808 |
| | miles (mi) | kilometers (km) | 1.6093 | 0.62139 |
| Area | square inches (in ²) | square millimeters (mm ²) | 645.16 | 0.00155 |
| | square feet (ft ²) | square meters (m ²) | 0.092903 | 10.764 |
| | acres (ac) | hectares (ha) | 0.40469 | 2.4710 |
| | square miles (mi ²) | square kilometers (km ²) | 2.590 | 0.3861 |
| Volume | gallons (gal) | liters (L) | 3.7854 | 0.26417 |
| | million gallons (106 gal) | megaliters (ML) | 3.7854 | 0.26417 |
| | cubic feet (ft ³) | cubic meters (m ³) | 0.028317 | 35.315 |
| | cubic yards (yd ³) | cubic meters (m ³) | 0.76455 | 1.308 |
| | acre-feet (af) | thousand cubic meters (m ³ x 10 ³) | 1.2335 | 0.8107 |
| | acre-feet (af) | hectare-meters (ha - m)■ | 0.1234 | 8.107 |
| | thousand acre-feet (taf) | million cubic meters (m ³ x 106) | 1.2335 | 0.8107 |
| | thousand acre-feet (taf) | hectare-meters (ha - m)■ | 123.35 | 0.008107 |
| | million acre-feet (maf) | billion cubic meters (m ³ x 109)◆ | 1.2335 | 0.8107 |
| | million acre-feet (maf) | cubic kilometers (km ³) | 1.2335 | 0.8107 |
| Flow | cubic feet per second (ft ³ /s) | cubic meters per second (m ³ /s) | 0.028317 | 35.315 |
| | gallons per minute (gal/min) | liters per minute (L/min) | 3.7854 | 0.26417 |
| | gallons per day (gal/day) | liters per day (L/day) | 3.7854 | 0.26417 |
| | million gallons per day (mgd) | megaliters per day (ML/day) | 3.7854 | 0.26417 |
| | acre-feet per day (af/day) | thousand cubic meters per day (m ³ x 10 ³ /day) | 1.2335 | 0.8107 |
| Mass | pounds (lb) | kilograms (kg) | 0.45359 | 2.2046 |
| | tons (short, 2,000 lb) | megagrams (Mg) | 0.90718 | 1.1023 |
| Velocity | feet per second (ft/s) | meters per second (m/s) | 0.3048 | 3.2808 |
| Power | horsepower (hp) | kilowatts (kW) | 0.746 | 1.3405 |
| Pressure | pounds per square inch (psi) | kilopascals (kPa) | 6.8948 | 0.14505 |
| | feet head of water | kilopascals (kPa) | 2.989 | 0.32456 |
| Specific capacity | gallons per minute per foot of drawdown | liters per minute per meter of drawdown | 12.419 | 0.08052 |
| Concentration | parts per million (ppm) | milligrams per liter (mg/L) | 1.0 | 1.0 |
| Electrical conductivity | micromhos per centimeter (μmhos/cm) | microsiemens per centimeter (μS/cm) | 1.0 | 1.0 |
| Temperature | degrees Fahrenheit (°F) | degrees Celsius (°C) | (°F - 32)/1.8 | (1.8 x °C) + 32 |
| <p>● When using "dual units," inches are normally converted to millimeters (rather than centimeters).</p> <p>■ Not used often in metric countries, but is offered as a conceptual equivalent of customary western U.S. practice (a standard depth of water over a given area of land).</p> <p>◆ ASTM Manual E380 discourages the use of billion cubic meters since that magnitude is represented by giga (a thousand million) in other countries. It is shown here for potential use for quantifying large reservoir volumes (similar to million acre-feet).</p> | | | | |
| <p>OTHER COMMON CONVERSION FACTORS</p> <p>1 cubic foot=7.48 gallons=62.4 pounds of water 1 acre-foot=approximately 325,851 gallons=43,560 cubic feet</p> <p>1 cubic foot per second (cfs)=450 gallons per minute (gpm) 1 million gallons=3.07 acre-feet</p> <p>1 cfs=646,320 gallons per day=1.98 af a day 1 million gallons per day (mgd)=1,120 af a year</p> | | | | |



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